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Western Samoa. Economic Development
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WESTERN SAMOA'S
ECONOMIC DEVELOPMENT PROGRAMME
1966—1970

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ERRATA SHEET

1. P. 17 Paragraphs 4 and 5, 1971 should be 1970.
2. P. 24 Last paragraph, Potlatch Industries Inc. should be Potlatch Forests Inc.
3. P. 35 Paragraph 1 - "Fertilizer Use" 130,500 acres changed to 88,000 acres.
4. P. 35 Paragraph 2 "Alafua Agricultural College" word "chosen" replaced by words "affiliated with".
5. P. 51 Column 2, paragraph 1, delete words "imports accounting for 71.3% of total imports" and replace with "rest of tobacco imports including".
6. P. 63 Paragraph 3, second column should be "affected" and "1970".
7. P. 68 Last paragraph "4%" should be "7%".
8. P. 74 Paragraph 1 - "560,000 acres" should be "560,000 cases".
9. iii Membership of Boards and Committees under "Economic Development Board" delete "non-voting members".

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PRIME MINISTER'S MESSAGE

FIVE YEAR ECONOMIC DEVELOPMENT PROGRAMME

Since Western Samoa gained its political independence in January 1962, it has been striving to strengthen its economy so that it can also attain economic independence and provide a fruitful life for the Samoan people. The task is not an easy one. Our country has one of the fastest growing populations in the world and the problem of providing for this population is immense. Without any outside help we are implementing the projects in the 1965 Economic Plan - our first economic plan. The 1966 - 1970 Economic Development Programme projects except for limited assistance in two projects, are also thus far being financed from internal sources.

We have passed an Enterprises Incentives Act to encourage new industry which is unequalled in its liberality in the Pacific area. Although the Enterprises Incentives Board is less than one year old, we have already granted incentives benefits to many new and expanding enterprises. We have had a group consultants make a study of the potentials of the visitor industry and have taken steps to encourage the establishment of additional hotel rooms in our country. We have passed legislation to allow the leasing of village lands and have since amended this legislation to allow a longer tenure of lease for hotel and industrial development.purposes. An Economic Development organisation has been established which prepares plans for development and also actively promotes the establishment of new economic enterprise.

We realise that large amounts of capital investment are needed to move our economy ahead commensurately with the rapid growth of our population. We are also aware that we need expert knowledge in the initiation of new enterprise which our people do not yet possess.

The programmes and projects we have initiated have been almost exclusively financed by us. Our capital resources, however, are very limited and it is impossible for us to provide the jobs and meet the basic needs of a population which is growing so fast it is expected to double in the next twenty years. We have done and will continue to do all we can on our own to develop our economy. It is evident, however, that we must increasingly depend on overseas capital and overseas aid if we are going to have any chance of developing commensurate with our needs. It follows then that we must aggressively make our opportunities and needs known to private, bilateral and multilateral capital aid sources.

With trust in God we are confident that our efforts will succeed and that our young country's development efforts will flower and bear fruit for the benefit of all of our people.

Fiame Mata'afa Mulinu'u II
PRIME MINISTER

FOREWORD

The 1966 - 1970 Economic Development Programme is another step forward in the nation's economic development effort. In a period of some two and one-half years an economic development organisation has been formed, and a 1965 Economic Plan and a five year development programme have been published.

I would like to express my gratitude to the many legislators, government officials and private citizens who have unselfishly given their time and effort on the many boards and committees, that make up the development organisation. The projects that have been included in both the 1965 Plan and the five year programme are a reflection of the views of many people. In this sense it is the people's programme since not only have so many participated in its formulation but its basic goal is a better life for our people.

From our studies of development plan programmes throughout the world as well as from our own experience we know that the implementation of plans and projects is as important as their formulation. It is "the doing" that determines the success or failure of a development programme. Although, primarily because of the hurricane, there had been delay in implementing some of the projects, the Economic Development Board is pleased that all projects are being implemented and satisfactory progress is being made. Some projects in fact such as the coconut planting and replanting project and the banana production project are ahead of schedule. We are grateful to the Copra Board for providing the financial assistance which has given impetus to the coconut planting and replanting project.

The Economic Development Board is giving close attention to implementation and to this end it requires a quarterly report on each project and is supplementing the written reports with field inspections. Because Western Samoa's internal resources are so limited, it is of prime importance not only to carefully select the projects for which investments will be made but also to ensure that they are efficiently implemented.

The primary emphasis in the nation's development effort is to expand the economic base so that the national income can be increased and employment opportunity expanded for our growing labour force. Only if we can expand our basic economic activity will we be able to earn the tax revenues necessary to do justice to education, health and to the roads, power, water and other infrastructure needs of the nation. Expanding the economic base, however, takes time. Our agriculture is essentially one of long term tree crops. A coconut tree planted today takes seven years to bear fruit We must, in the short term, also recover from the devastating effects of the 1966 hurricane before we can begin to move forward again. Although there is little question of an austere period ahead there is also little question that the programmes and projects initiated now will put sinews into the economy and with adequate overseas investment and aid there are good prospects for a bright economic future.

An element that is essential for the success of any development effort is the full support of the various departments of government, the Legislative Assembly, the business community, planters-both village and private and, in fact, all of the people of Western Samoa.

The benefits of economic development accrue to the entire community and all should participate in strengthening our economy. By strengthening the economy we are not only improving our individual economic lot we are also strengthening our nation and providing an economic legacy for our children and many future generations.

G.F.D. Betham

MINISTER OF FINANCE AND ECONOMIC DEVELOPMENT
and
CHAIRMAN OF THE ECONOMIC DEVELOPMENT BOARD

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Introduction

THE most important factor in the success of any economic development effort is the "spirit" of the people. This "development spirit" is reflected in the desire, energy and leadership of a people and is more important for economic development than the availability of natural resources or accessibility of markets. Amazing things happen when the "development spirit" is present in abundance. Thus such countries as Japan, Israel and the Commonwealth of Puerto Rico have overcome seemingly insurmountable obstacles and have become prime examples of success in a development minded world - largely because of the "spirit and will to develop".

If the "development spirit" is present, a favourable "climate for growth" will be established. Before economic growth can take place, it must, like plant life, animal life or any human endeavour, have the environment necessary for development. Without the proper "environment for growth" an economic development effort will either be stunted or short-lived. The "environment for growth" or "climate for growth" is not based on physical matter but in the minds and will of men.

A favourable "climate for growth" is indicated by—

(1) the attitude and willingness of the government and people to improve the efficiency and capacity of government administration in planning, implementation of projects and in co-ordinating and controlling development efforts,

(2) the attitude and assistance given to the establishment of new economic enterprise and to the expansion of existing enterprise as reflected in tax and duty free incentives, equity loans, making land available at reasonable prices or lease rents, advertising and promotion for new industry and a host of other incentives.

The government and people of Western Samoa have indeed shown the "will to develop" and have translated their recognition of the need for development and their desire for a faster rate of economic growth into positive action. This action includes the establishment of the Economic Development Board and the Department of Economic Development; the passage of the Enterprises Incentives Act and the establishment of the Enterprises Incentives Board; the passage of the Handicrafts Industry Act and the establishment of the Handicrafts Industry Development Corporation; the passage of the Alienation of Customary Lands Act allowing the leasing of customary land and the amendment of the Act increasing the lease tenure for hotel and industrial uses; the formulation and unanimous approval of the 1965 Economic Plan and the implementation of projects under that plan; the amendment of the Public Companies Act to allow Western Samoans to invest in public companies without first obtaining approval of the Head of State; the completion of the "Visitor Destination Area Program" study by a group of international consultants; the retention of a visitor consultant for advice on visitor development matters; the joining of the Pacific Area Travel Association; the hiring of a visitor co-ordinator and the initiation of visitor promotional efforts; the amendment of the Immigration Act to waive the entry permit requirement for visitors who stay in Western Samoa for three days or less; and the offer to jointly participate in hotel investment.

Perhaps the most impressive advances have been in the changes in attitude of the government and the people toward the visitor industry, and the attraction of overseas capital and know-how. Those who are familiar with Western Samoa are aware that as early as two years ago the nation did not encourage the initiation of overseas investment or visitor activity. Today the situation is completely reversed with the nation encouraging overseas investment as exemplified by the passage of the Enterprises Incentives Act, the granting of benefits under the Act to a group of Japanese timber mill investors and the current negotiation with a large American forest products firm which desires to make a major investment. Similarly, in respect to the visitor industry the nation's support of this industry is exemplified by many actions including the granting of incentives benefits for a 44-room hotel expansion, and the government's offer to invest in a hotel with private interests.

One of the basic fears that the people of the nation have had is the possible inhibition by development of the matai (chiefly) system which has stood the country in good stead throughout its history. Mr J. B. Wright, former New Zealand High Commissioner and now a planter in Western Samoa, had this to say in a radio address in December 1964 shortly before retiring from office:

> "I have heard it said that some people are saying that the Samoans should not support this thing which is on everybody's lips these days - this thing called economic development - because it will destroy their old way of life.
>
> It could, you know, be argued with equal if not greater force and logic that Samoan custom will perish the sooner if we do not throw our weight behind the Government in its endeavour to increase the national income of Samoa............
>
> I am afraid the days are over when we could go along happily clearing a bit of bush and growing our taro and bananas in virgin soil, and then letting the land revert to second growth for a few years to allow and restore its fertility the natural way while we moved on to a new area...........
>
> From now on the economy of Samoa which in the past because of the happy combination of large areas of land and a relatively small and stable population has been able to look after itself, will have to be managed — it will have to be planned if standards are not to drop and we are to have enough money to maintain our schools and hospitals and roads and all the things we have become used to.
>
> There will have to be greatly increased areas in cultivation; and what is just as important there will have to be greatly increased yields per acre from those cultivations. There will have to be secondary industries...........we simply must give more consideration to other industries besides agriculture...........
>
> None of us in his right sense would advocate the throwing over board of all that is good in Samoan custom. But let us face facts. Such is the pressure of population in terms of available land that, as sure as night follows day,

> there are going to be changes in Samoa, whether we like it or not.........
>
> If Samoa is to safeguard its right to determine its own destiny — its right to hold fast to those customs and traditions which it holds dear; if in short it is to preserve its national identity and remain truly independent then it simply must increase its national income."

The government and people of Western Samoa have taken hold of economic development. They recognize its need and they desire to keep the economy growing commensurate with the growth of population so that there is not retardation but improvement in the life of the people.

There are many facets to economic development which are not generally recognized. The concept of economic development includes—

(1) the generation of interest and desire in a people and government for economic development which is translated into a "will to develop" — a "development spirit";

(2) the taking of action which establishes a "climate for growth";

(3) to the extent possible — the husbanding of available resources and the allocation and investment of such resources in a wise and logical manner so that waste is kept to a minimum and the greatest returns are obtained from the investment made, i.e. "economic planning";

(4) the implementation of plans and projects.

(5) the promotional development effort necessary both within the nation and overseas to attract investment capital, know-how and credit to meet the economic needs of the nation;

(6) the control of the development effort so that it reflects the aspirations of the people and enhances their development and enjoyment of life.

The economic plan or economic programme is only a part of the entire process of economic development. It is one tool in the economic development kit. This report is primarily concerned with the economic development programme but it also reflects the importance of the other aspects of the economic development effort.

The type of economic development effort undertaken must be suited to the needs of the particular country. Similarly, as a tool of economic development, the kind of plan or development programme a nation undertakes must also be fitted to its needs.

The need to reflect the type of planning to suit a particular country has been carefully analyzed by the World Bank in a definitive study of planning in over 100 countries. Mr Albert Waterston of the Bank states:

> "the kind of planning a country does is largely determined by the combined effect of its social, economic and political structure and its stage of development. Because of differences in structure and stage, the scope of national development planning at any time can and does range from the limited and piecemeal, project-by-project approach found in mixed economies in early phases of development to the comprehensive, centralized planning found in socialized economies.
>
> When Burma, Ceylon, Bolivia, Ghana, Ethiopia, Indonesia, Morocco and the Philippines, among other countries in early stages of development

> sought to emulate planning procedures in countries at a later development stage by replacing their ad hoc approach with comprehensive planning they found the shift to be premature and most abandoned their comprehensive plans before the end of their planning periods. Countries with an understanding of the complexities of comprehensive planning tend to start with partial planning." 1)

It is clear that it would be disastrous for Western Samoa to attempt to prepare the type of plan or programme that is not suited to its particular needs at this particular time in its social, political and economic development.

What type of plan or programme approach should Western Samoa follow? Mr Richard H. Demuth, Director of Development Services of the World Bank has this to say about countries with limitations in the availability of data and skilled personnel:

> "Where these limitations exist two principal choices are presented. One alternative is to ignore the limitations or pretend they do not exist.......... The resulting plan is likely to be an impressive but essentially fanciful document with a misleading appearance of precision which may have regrettable, even disastrous, consequences for the economy ...... The second of the alternatives is to devise a more modest plan which takes account of the practical limitations of the data, managerial capacities and skilled manpower available and which, rather than prescribing an aggregate overall model for the entire economy, focuses on a general strategy of development and an investment program for the public sector based on a series of specific projects. Having seen the planning process from the Bank's side, I would without hestitation urge this second course for most countries with whose economies I am familiar." 2)

Too many countries have put too much faith in a planning document and not enough effort in improving their administrative process for successfully carrying out action programmes that are the heart of economic development.

> "Planning has undoubtedly promoted development in many countries. But postwar history reveals that there have been many more failures than successes in carrying out development plans. Indeed, among developing nations with some kind of market economy and a sizeable private sector, only one or two countries seem to have been consistently successful in carrying out plans ....
>
> While most countries with development plans have not succeeded in carrying them out, some countries without national development plans or national planning agencies have been developing rapidly. For example, Mexico between 1940 and 1955, when it had no planning agency or plan...... maintained an annual growth rate of 5-6 percent. Israel, which had no plan before 1961 and still does not have one which the government follows,

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(1) Waterston, Albert: *Development Planning Lessons of Experience* The Economic Development Institute I.B.R.D., John Hopkins Press

(2) *Ibid*, quoting, Demuth, Richard H., *Planning Projects and People*

> has been able to maintain an even higher growth rate. Puerto Rico has become a showcase of development without benefit of a development plan." 3)

This does not mean that had such countries had development plans they might not have done even better. The fact, however, is that a nation can develop rapidly and successfully without a plan or programme if it carries out the other elements of the economic development process successfully. The plan or programme must not be a crutch to lean on and which results in a hobbling through the other necessary and equally important aspects of economic development.

> "The system of national planning should therefore be permitted to evolve gradually, firstly as soon as possible, from the project-by-project approach to a second stage in which the country learns how to prepare and implement a co-ordinated public investment plan............" 4)

Western Samoa is following this procedure. The 1965 Economic Plan consisted primarily of a series of projects, prepared according to a prescribed form, and directed exclusively to stimulating basic activity. The 1966-1970 Economic Development Programme has gone a step further in that a co-ordinated public investment programme has been developed over the five year period. As the public investment approach is perfected, substantive planning by government departments is improved and the necessary economic statistics become available, the nation can begin to engage in aggregative planning. In addition to the need for sophisticated statistical data and experienced substantive departmental planning, this can only be done with a highly efficient administrative structure and a full understanding of the complicated development process and its uses. There must also be understanding and participation in the overall economic development effort if it is to be successful. In Western Samoa over 75 people in the community, including more than one-third of the Legislative Assembly, are on boards and committees involved in the economic development effort.

The economic development effort in Western Samoa has matured considerably since it was initially organized in September 1964. Economic development effort is a dynamic process and should continuously be adapted to meet the needs of the nation. The 1966-1970 Economic Development Programme is a part of this dynamic process.

Andrew Gerakas

DIRECTOR OF ECONOMIC DEVELOPMENT

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(3) Waterston, Albert, "A Hard Look at Development Planning", *Finance and Development*, Volume III, June 1966, Number 2, IMF and IBRD

Op. cit.*, Waterston, Albert; *Development Planning Lessons of Experience

Section I

Description

Beginnings are apt to be shadowy, and so it is with the grey beginnings of the archipelago, Western Samoa. Somewhat intriquing but nevertheless entirely plausible, the theory is put forward here that the Western Samoan islands were once barren reefs barely lifting their heads above water. Then pieces of driftwood caught fast and rotted...........from distant shores seeds blew in and trees grew.................then some ancient Polynesian mariners lost in the wilderness of ocean fortuitously came upon these fragments of land and made them their home. These were the original Samoans. When they came and how long they have lived on these islands which are now theirs, nobody knows!

The Land

The Independent State of Western Samoa lies in central Polynesia between latitudes of 13° and 15° south and longtitudes 168° and 173° west and between it and Fiji runs the International Dateline separating today from tomorrow — so that, if it is late Saturday in Western Samoa, it is already late Sunday in Fiji. The Samoan group lies 2,613 miles southwest of Hawaii, 2,700 miles from Sydney, only 1,800 northeast of New Zealand, 793 miles from Suva and 80 miles away is Pago Pago, the Capital of American Samoa.

Nine islands make up Western Samoa. Two of those islands — Upolu and Savaii — account for almost all of Samoa's land mass and harbour virtually the entire 134,000 of population. Total land area is 1,090 square miles of which 660 square miles make up the islands of Savaii and 430 square miles the islands of Upolu. Situated on the north coast of Upolu is the town of Apia the political capital and commercial centre of the nation with a population of about 25,000. The islands are formed mainly of volcanic rocks. There are many dormant volcanoes and old lava fields. Coral reefs surround much of the Western Samoa coast line. Against the outer slopes of the reef — waves dash in unrelentless anger. Within the reefs, lie the blue and peaceful lagoons. Fresh water abounds in the rivers, lakes and waterfalls. Lush-green mountain country rises to blue-green heights, 3,608 ft. in Upolu and 6,094 ft. in Savaii, to overlook the green acres of coconut, cocoa and banana plantations on the lowlands, the beautiful beaches that grace the shoreline and the picturesque Samoan villages that stretch along the foreshore and the off-shore islets.

Climate

The climate of Western Samoa is pleasantly tropical (72° - 86°F) with more than, 2.500 hours of sunshine per year. During the cooler months May through November, the fresh trade winds make living pleasant and comfortable. Officially the "rainy" season extends from December through April. In actual fact the pattern is much the same all year round; brief downpours alternate with long stretches of sunshine. This steady flow of sun and rain combine to produce a lush vegetation of rain forest which covers much of the islands. Sea temperatures are ideal all year round being mostly in the lower eighties (80° — 85°F) and seldom as low as 75°F.

People......................Their Way of Life

The population of Western Samoa is now some 134,000. It is one of the fastest growing populations in the world. In 1976, ten years from now, the population is expected to be over 190,000 and in 1986 almost 270,000.

The Samoans have always claimed for themselves the centre of the Polynesian world, and pride has remained a characteristic trait. They are the purest surviving Polynesians. With the possible exception of New Zealand with its Maoris, Western Samoa shelters the largest Polynesian population in the world today. Certainly its Polynesian culture is the least diluted by the introduction of different ideas from the outside. Without a doubt, the Samoans have not mixed with other races as much as their cousins, the Hawaiians or Tahitians and while some intermingling of blood has taken place, a very high proportion are full blooded Polynesians.

The Samoans are bulwarks of Christianity. They have assimilated their religious observance into the pattern of their village lives with the result that every village today has a church of near cathedral proportions. Some of the churches are enormous in proportion to the congregations that contribute to their upkeep, but they're the centre of a way of life in these islands. The London Missionary Society, Roman Catholic, Methodist, Latter Day Saints, Seventh Day Adventist missions and others have all found Western Samoa fertile ground for their work. Religious observance is strong in all groups.

The secular aspects of Samoan life are equally noteworthy. The Samoans love ceremony, sports, singing and dancing. Most events of significance are marked by ceremony – the kava ceremony is a must at meetings of chiefs, when entertaining important guests and on occassions of particular rejoicing or great sorrow. Ta'alolo the traditional presentation of gifts from one village to another or to visitors is a regular occurance. Of the games introduced by the European to the Samoan, cricket is the most popular in the islands. The Samoan version of cricket is a combination of English cricket and American baseball. Rules are elastic – developed and changed as the game progresses with nearly the entire village population participating. Dancing comes naturally to men and women alike, and any occasion is excuse enough for a heart-warming session of dancing.

Dignity and a sense of personal satisfaction in one's lot are characteristic of the Samoan. The Samoans themselves have a way of explaining it: There is a seabird which possesses a long feather in his tail; if he loses that feather, he loses his sense of balance. It is the same with a Samoan and his inborn sense of dignity.

In what has traditionally been an agricultural economy, the Samoan is prone to be content with his few possessions. It has been truly said that if a Samoan has healthy children, a neat and comely wife, a house of his own, a coconut tree and a banana tree, and a few pigs, he has intelligence enough to know that he is well off.

As the purest surviving Polynesian type, he is conservative and unspoiled. In character, the Samoan is a person with a reputation of being upright and dignified, is friendly to visitors but expects his customs to be respected. The majority of Samoans can be seen living their lives in their traditional native fashion almost entirely unaffected by contact with another civilization.

Today, as in the past, the unit of Samoan life is the aiga (pronounced eye-ing-a) (family). Such a family is not merely the immediate family as Europeans understand the term, consisting of parents and children, but an extended family group of blood, marriage and adopted connections; family ties are always strong. The whole aiga (family) is involved in upholding the honour of the title that gives them identity and standing in Samoan life. The matai (chief) or that member of the family on whom the title is conferred by the family is the acknowledged chief for the family. Selected by common consent of the aiga, the matai assumes responsibility for directing the use of family lands and other assets belonging to the aiga. The matai must, by his behaviour do honour to the title he bears and the people whose social status is bound up with it. This is especially true on such occasions as births, deaths, marriages, the investiture of chiefs and playing host to visitors. In return for his leadership the matai is rendered services by the tautua (untitled) and matai (titled). There are traditional services which are rendered to the chief. There is not the autocratic type of relationship that one might think exists. For example, if a chief's daughter is to be married, he will call his aiga (family) together and all will decide who will provide the dress, the food that each will bring, the entertainment, presents and so forth. This is traditionally accepted by the people and

Contrasting architecture in a village

A village in Savai'i

One of Western Samoa's stately churches—Catholic church at Aleipata, Upolu.

Methodist church at Piula—Upolu

there is no resistance to the requirements to provide such service.

First European Contacts and Political Development

For centuries, Western Samoa lay undiscovered by any white man. The ancients believed the world as created by their supreme deity Tagaloa Lagi, was shaped like a mushroom, with a domelike sky above the three principalities perched on the stem beneath that dome: Western Samoa, Tonga and Fiji.

Little is known of Samoan history before the year 1250. Since then, the genealogies of important titles, legends and charts provide a reasonable clear outline of the main events of Samoa's political history. Modern historians who have made a study of this unwritten history believe it to be substantially accurate.

First European contact with Western Samoa began in 1722 with a visit by the Dutch navigator, Jacob Roggeveen. In 1830 pioneer missionary John Williams landed in Savaii, and from then on the true modern history of the Samoan people began. Samoan society has thus been in contact with the western world for more than a century, yet it has largely retained its traditional organisation, responding by a process of growth, adaptation, and modification to the various external influences to which it has been exposed. The Church and the trading stations have become intergral parts of village life, but politically the traditional institutions have shown more resistance to change.

In the closing years of the 19th century, Germany, Great Britain and the United States of America obtained privileges in Western Samoa for themselves and their nationals and sought to extend their spheres of influence. These three powers established consulates in Apia from 1847 onwards, and thereafter for nearly fifty years the history of Samoa reads like some page from the Persian archives — internal and bitter strivings for kingship, intrigues and bickerings, interference by the Consuls, and their partisanship of the rival claimants. Jealousy and continuous disputes among the representatives of the European powers in Western Samoa reached a climax in 1889 when a special Commission was set up by the powers concerned to end the three-way power struggle over Western Samoa. This Commission divided the group between Germany and the United States of America Germany taking Savai'i, Upolu and the adjacent smaller islands, (Western Samoa) and the U.S.A. taking Tutuila and adjacent smaller islands, (American Samoa,. Great Britain withdrew in return for recognition of her rights in other Pacific Islands.

Germany administered Western Samoa until the outbreak of World War I in 1914. On August 29, that year New Zealand military forces accupied the Territory. In 1919 New Zealand was granted a League of Nations mandate over the territory and by the Samoa Act of 1921 made provision for civil adminitration which replaced the wartime military regime.

Progress was made in education, health, and economic development. Some of the Government measures were, however, unpopular with conservative Samoan opinion, and in 1927 a growing body of opposition found an outlet in the Mau movement, which embarked on a programme of civil disobedience which lingered until 1936.

Steps taken to make the Samoan administration more effectively representative were interrupted by the Second World War. Shortly after the end of the Pacific War in December, 1946, Western Samoa was placed under a United Nations Trusteeship with New Zealand as administering authority. The Samoan people asked that they be granted self-government but this was not accepted at the time.

In the period 1947-61 a series of constitutional advances has brought Western Samoa from dependent status to self government and independence. Visits by United Nations missions greatly assisted this transition. In 1947 a Legislative Assembly was established. In March 1953 New Zealand proposed a quickened pace of political and economic development and a Constitutional Convention representing all sections of the Samoan community met in 1954 to study proposals for political development. Its recommendations were in the main adopted by New Zealand and governed the territory's evolution towards Cabinet Government.

In 1957 the elected Samoan membership of the Assembly was increased to 41 (out of 47) and the old advisory body, the Fono of Faipule, was abolished. The Executive Council was enlarged in its powers to function as a Council of Ministers.

In January 1959 a Working Committee on Self-Government was established and empowered to work out a draft Constitution. Cabinet Government was inaugurated in October, 1959 and the Hon. Fiame Mata'afa F. M. II became the first Prime Minister.

A Constitutional Convention met in August 1960 and formally adopted the Constitution and other important recommendations. At the request of the United Nations a plebiscite was held in May 1961 and by an overwhelming majority the Samoan people voted for independence, on the basis of the Constitution, on 1st January, 1962. In November, 1961 the General Assembly of the United Nations voted unanimously to end the Trusteeship Agreement and the New Zealand Parliament passed the Independence State of Western Samoa Act, formally ending New Zealand's powers over the country.

On 1st January, 1962 the people of Western Samoa celebrated the emergence of their country as the first independent Polynesian State. Its smooth transition from Trusteeship to Independence on the 1st January, 1962 evoked considerable international comment. Observers have remarked that "Western Samoa's independence has been the smoothest and most non-violent achieved under the United Nation's sponsorship." Unlike many newly independent countries, Western Samoa's first years have been marked by political stability.

Government

Western Samoa has a strong and stable democratic parliamentary system of government patterned after the British parliamentary system.

Constitution

The Constitution of the Independent State of Western Samoa came into force on 1 January, 1962.

Head of State

His Highness Malietoa Tanumafili II is at present the Head of State and will continue in office for life. After that the Head of State will be elected by the Legislative Assembly for a five-year term.

Executive

Executive Government is carried out by a Cabinet consisting of a Prime Minister whom the majority of the Legislative Assembly elect and eight other Ministers selected by the Prime Minister.

Legislative Assembly

The Legislative Assembly at present consists of 47 members, 45 representing Samoan constituencies and two members representing persons whose names appear on an individual voters roll (those persons who previously were on the European electoral roll and who did not choose or have the opportunity to acquire matai titles.) Samoan members are elected by matai suffrage.

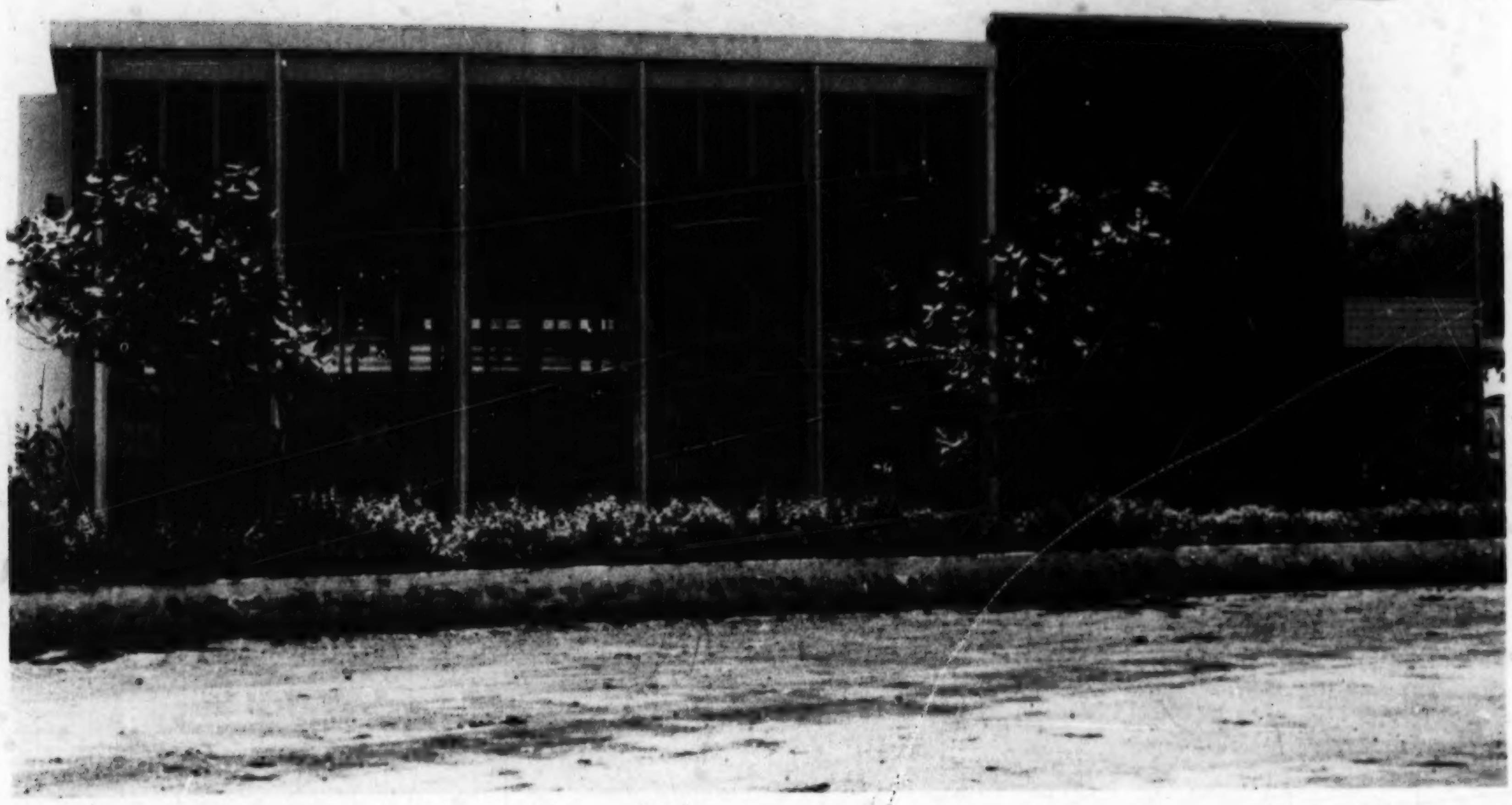
The Constitution provides for the dissolution of the Assembly and new elections every three years. The Speaker is elected by the Assembly.

Chiefs at Lefaga, Upolu

School Children

The Fono House at Tiafau

The Land and Titles Court



The Nelson Memorial Library

Apia Street

Apia Skyline

Section II

Economic Development Organization

Economic Development Committee

In July 1961 Cabinet established an Economic Development Committee of 11 members which included four ministers, three members of the Legislative Assembly and four departmental heads of Government. In December 1961 the Committee published its report, "Report of the Economic Development Committee on Economic Planning for Western Samoa." There was no permanent staff established and the staff work for the committee was performed by the Financial Secretary. This report recommended the establishment of a permanent Economic Development Organization. A three month study was conducted in late 1962 by A. Lauterbach and V. D. Stace which was financed under the United Nations Programme of Technical Assistance. The report titled *Economic Survey and Proposed Development Measures for Western Samoa* was published in April 1963. In April 1964 a United Nations Development Economist was recruited to establish an economic development staff organization and prepare economic plans.

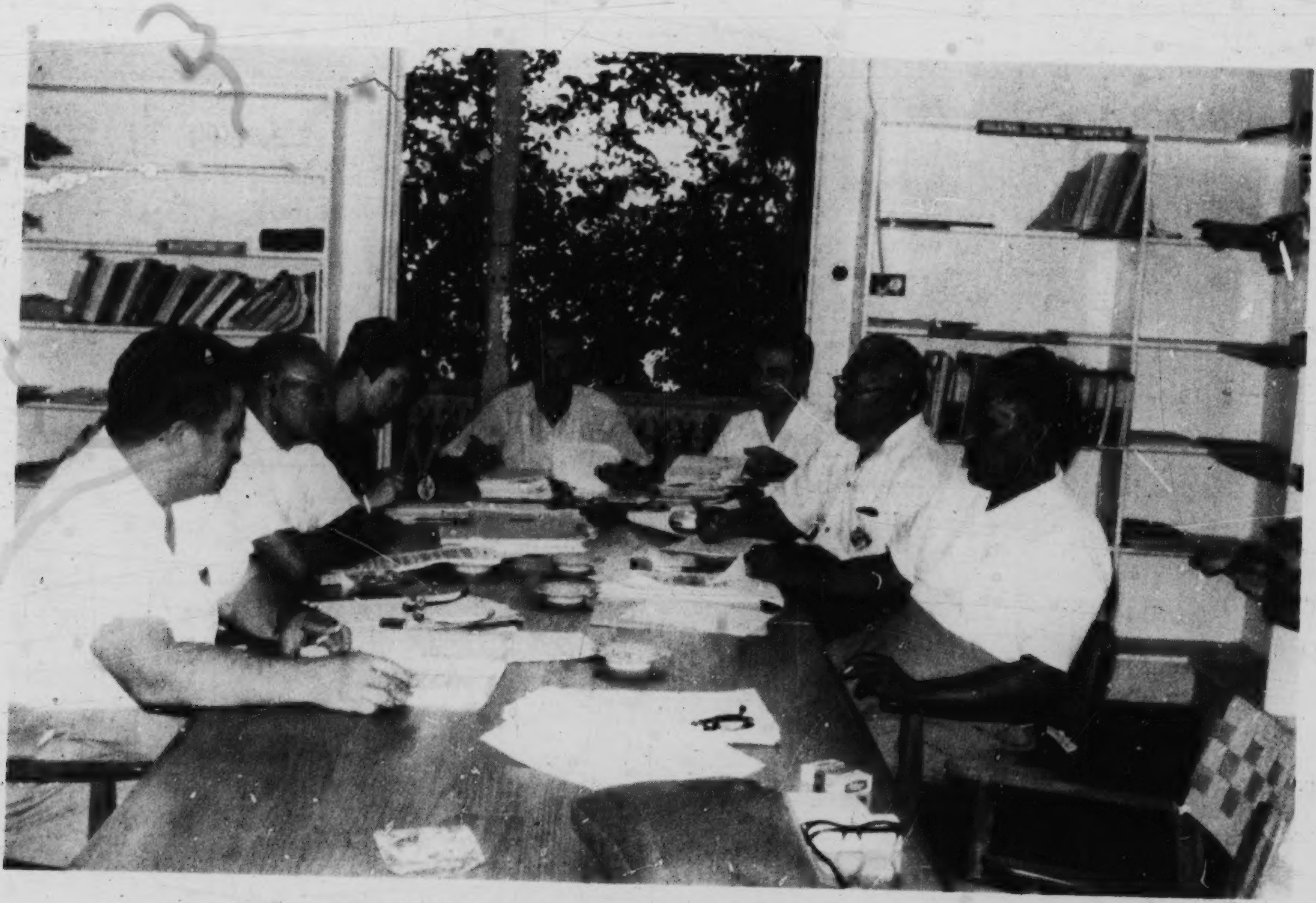
Economic Development Board

On 1 September 1964 Cabinet established the Economic Development Board, six advisory committees to the Board and an Economic Development Secretariat headed by the United Nations Development Economist. The Board served as a Committee of Cabinet with the advisory committees assisting the Board by formulating projects and plans in their respective substantive areas. The Board consisted of the Chairman – the Minister of Finance & Economic Development; the Minister of Agriculture, the Minister of Lands & Survey and the Minister of Public Works. In addition the United Nations Regional Representative was an *ex officio* non-voting member of the Board.

The six development advisory committees operated in the substantive areas of Agriculture, Land Development, Industrial Development, Finance and Credit Development, Public Works and Health and Education.

The Economic Development Secretariat which was under the Prime Minister's Department had its first budget approved for the second half of 1964. The total budget was £2,460 and called for the employment of an Assistant Director, two Development Offcers and a Secretary/typist. The United Nations Development Economist who directed the operations of the Secretariat was provided by the United Nations.

In January 1965, an annual plan, the first economic plan prepared by Western Samoa was published and tabled in the Legislative Assembly. The plan was accepted without change. As decreed by Cabinet the annual plan was restricted in its recommended expenditures to job and income creating activity. There were 11 projects, five of which were in basic agriculture including a land development scheme, agricultural incentives, development of coconut planting material, multiplication of superior cocoa planting material and control of rat damage to coconut trees experiment; an additional agricultural related project was the establishment of a food processing industry development laboratory. Three projects were related to the visitor industry – a hotel development project, a visitor destination area study and membership in the Pacific Area Travel Association. An overseas trade and development office in New Zealand was called for to promote exports and encourage investment in Western Samoa. Finally, the plan called for the establishment of a Handicrafts Industry Development Corporation to promote the development of an export handicrafts industry.



Economic Development Board in Meeting.

Members of the Industrial Development Advisory Committee and the Economic Development Board pose with Visitor Consultants before starting malaga (survey Trip) partments and agencies of the Government, public corporations and boards, and districts, villages and persons engaged in implementing individual projects or other aspects of economic plans approved by the Legislative Assembly;

(d) Periodically to appraise, and report to the Board on, the efficiency with which individual projects and other aspects of economic plans approved by the Assembly are being implemented;

(e) To co-ordinate the activities of all other Departments and agencies of the Government, all public corporations and boards, and all districts, villages and persons so far as they are engaged in implementing individual projects and other aspects of economic plans approved by the Assembly; and to report to the Board thereon;

(f) To publish, by such means as he thinks fit, information as to economic plans and projects approved by the Assembly, and as to the progress made in implementing the same;

(g) To advise and assist where necessary districts, villages and individuals in implementing projects and other aspects of economic plans approved by the Assembly;

(h) To establish and maintain a Western Samoa Trade and Development office in New Zealand;

(i) To encourage and develop the Western Samoa Tourist Industry and tourist traffic to and within Western Samoa;

(j) So long as the Government is a member of the Pacific Area Travel Association, to act for the Government in its dealings with that Association.

Five Year Development Plan Budget

The Economic Development Board recommended and Cabinet and the Legislative Assembly have approved a five year development plan budget for the period 1966-1970. The total cost of the projects included in this budget is £957,467. The budget includes projects in Agriculture which has £586,642 of the total, Visitor and Secondary Industry — £111,835, Public Works — £202,400, Social Services — Health £22,095, Social Services — Education £3,180, Trade Development & Credit £30,260 and Telecommunications £1,055. The budget does not include capital aid to education by New Zealand and some minor capital items included in the operating or maintenance budget. In addition, capital items for harbour development and capital expenditures from the banana scheme fund are not included in the development budget.

The 1966-1970 development plan budget projects are covered in more detail in another section of this report.

Department's Budget & Staff

The Maintenance (operating) budget for the Economic Development Secretariat (later the Department of Economic Development) totalled £6,635 in 1965 with provision for five local employees. In addition, the United Nations provided the Development Economist, who directed the operations of the Department, and an Associate Economist who joined the staff in December of 1964 for a total staff of seven.

In 1965 the Department's operating budget was supplemented by £11,830 for four development projects assigned to it for implementation or a total budget of £18,645.

The 1966 operating budget for the Department totalled some £9,345 with the addition of a local employee and the provision for payment of the local base salary of the United Nations Development Economist who was scheduled to be transferred to the United Nation's Operations Executive scheme. The current total number of staff in the Department is eight. This includes a Director, Assistant Director, a United Nations Associate Economist, two Development Officers, a Visitor Co-ordirator, a Secretary Typist and a Typist. In addition, the United Nations is recruiting a second Associate Economist. When fully staffed the Department of Economic Development will have a staff of ten. This includes a Trade and Development Commissioner in New Zealand in addition to the foregoing staff listed.

Other Development Activities

The functional chart of Economic Development Organization in Western Samoa shows the current relationships between existing organizational bodies. See Figure I.

In addition to the Economic Development Board and its committees two acts passed in October 1965 established two additional development organizations. The Enterprises Incentives Act 1965 established the Enterprises Incentives Board and the Handicrafts Industry Development Act 1965 established the Handicrafts Industry Development Corporation.

Enterprises Incentives Board

The Enterprises Incentives Act provides for the Enterprises Incentives Board to recommend to Cabinet the granting of incentives to enterprises in manufacturing, processing, hotel and visitor support facilities, fisheries development, forestry development and research and research development activities. The incentives that may be granted include:

A five year tax holiday with the possibility of renewal for another five years;

Duty free import of building materials, equipment, vehicles, etc., needed for the approved new or expanding enterprises; and

A moratorium on taxes on dividends paid up to the capital amount invested in the company by each shareholder during the period of the tax holiday and for two years following the end of the tax holiday.

A number of companies have been granted incentives including a hotel, soft drink bottling company, two garment manufacturing companies, ice cream manufacturing company and biscuit factory.

The Enterprises Incentives Board is chaired by the Minister of Economic Development and the Director of Economic Development is the Secretary to the Board. In addition to the Minister the five voting members include two representatives of the Legislative Assembly, a representative of business and a planter. There are also four directors of government departments who are non-voting members of the Board. These include the Directors of Economic Development, Customs, Inland Revenue and the Financial Secretary.

Handicrafts Industry Development Corporation

The Handicrafts Industry Development Corporation has been financed initially by government grant. The Corporation has had a number of meetings in organizing its work for the development of the handicrafts industry in Western Samoa and has appointed a staff. Members of the Corporation include:

A representative of the Legislative Assembly, who is the Chairman;

A representative of the business community, who is the Vice Chairman;

A representative of the National Council of Women;

The Chairman of the Industrial Development Advisory Committee;

The Director of Economic Development;

The Financial Secretary; and

The Director of Agriculture.

The Department of Economic Development administers the Act on behalf of the Government.

Development Loan Committee

The Bank of Western Samoa by agreement with the Government of Western Samoa has agreed to administer a development loan program with funds initially provided by the government. The loans are approved by a development loan committee consisting of the Bank Manager, as Chairman; the Director of Economic Development; the Director of Agriculture; the Financial Secretary and a representative of the Legislative Assembly. An initial grant of £10,000 has been loaned out in small loans to planters.

Broad Participation

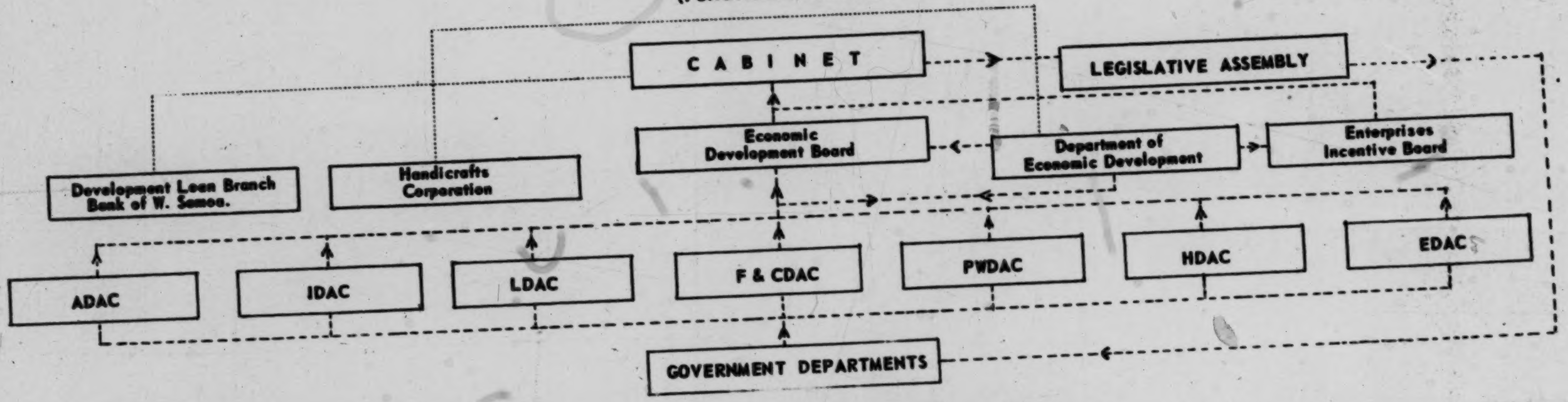
There are some 75 individuals representing every aspect of the community serving on boards and committees in the nation's economic development effort. Although frequent meeting by some 11 committees and boards provides a considerable administrative load this has provided a means of participation by community leader and has served as a channel of education and support for economic development projects and programs in the initial stages of the nation's development efforts.

Fig. 1

GOVERNMENT OF WESTERN SAMOA

ECONOMIC DEVELOPMENT ORGANIZATION

(FUNCTIONAL CHART)


CABINET
LEGISLATIVE ASSEMBLY
Economic Development Board
Department of Economic Development
Enterprises Incentive Board
Development Loan Branch Bank of W. Samoa.
Handicrafts Corporation
ADAC
IDAC
LDAC
F & CDAC
PWDAC
HDAC
EDAC
GOVERNMENT DEPARTMENTS

A. **ECONOMIC DEVELOPMENT BOARD AND COMMITTEES:**

1. Department Heads chair 6 of 7 Committees.
2. Committees prepare projects with assistance of Department of Economic Development as needed.
3. Department of Economic Development also submits reports and project proposals to Committees. Including suggestions from the general public
4. Committee plans and projects are submitted to Board by Department of Economic Development after fitting into overall programme with recommendations.
5. Economic Development Board accepts, rejects, modifies, and submits plans and programmes to Cabinet. Financial Secretary certifies as to availability of funds.
6. Cabinet accepts, rejects, modifies and sends plans and programmes to the Legislative Assembly.
7. Legislative Assembly accepts, rejects, modifies and appropriates funds for carry out plans and programmes.
8. Cabinet releases funds and Departments carry out programmes, reporting quarterly on progress to Economic Development Board.

B. **ENTERPRISES INCENTIVES BOARD:**

1. Receives recommendations from Director of Economic Development on granting of incentives to applicant enterprises.
2. Accepts, rejects, modifies and recommends to Cabinet.
3. Cabinet accepts or rejects applications.

C. **HANDICRAFTS CORPORATION:**

1. Established as independent Corporation with grant from Government to develop handicraft industry. Department of Economic Development administers Act.

D. **Development Loan Branch, Bank of W. Samoa.**

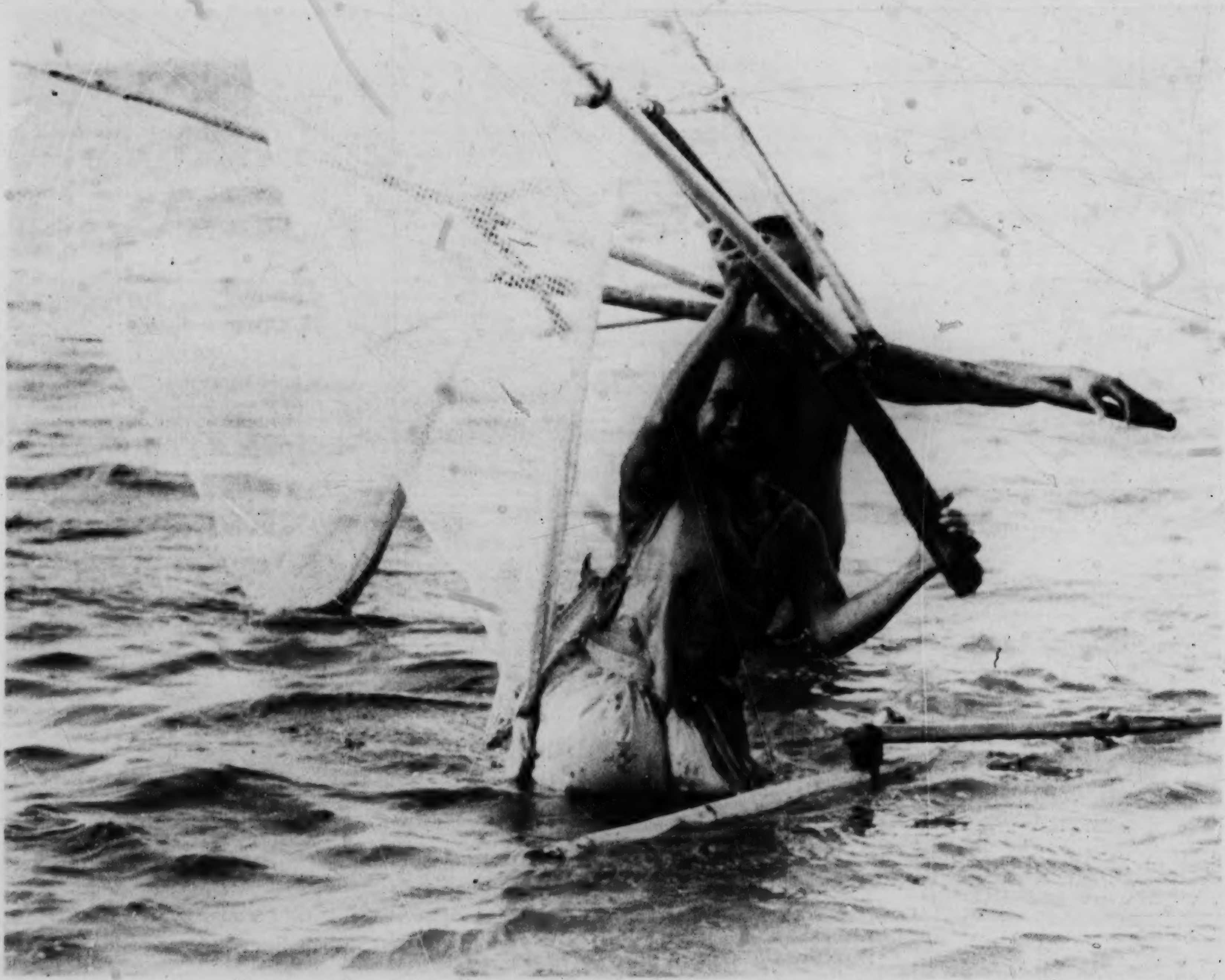
1. Established by Government with grant of £10,000 to make small development loans.

COMMITTEE ABBREVIATIONS:

DAC	Development Advisory Committee
ADAC	Agricultural DAC
IDAC	Industrial DAC
LDAC	Land DAC
F&CDAC	Finance and Credit DAC
PWDAC	Public Works DAC
HDAC	Health DAC
EDAC	Education DAC

Washing clothes in a stream

A Construction gang foreman



A mullet catch inside the reef

A Kava Ceremony

Section III

Present Economic Situation

eneral

The 1,097 square miles that make up the land f Western Samoa consist primarily of rocky vol-anic soils which have not as yet decomposed nough to allow farm machinery to be utilized ffectively.

Some 80.5% of the land is customary land nd controlled by the matai or chiefs. The matai in effect the trustee of the estate of the ex-ended family group (aiga). The pule or control f the land does not necessarily pass from the hief to his son as there is an election of a new ma-i when a matai dies. There is also the chance that he chief can be deposed and a new chief elected. here is, therefore, no continuity in the control of ustomary land.

The matai of each extended family group aiga) permits the use of the land by the tau-'ale'a (untitled). The taule'ale'a give service to he chiefs in the form of labour, food, assistance the contruction of the chief's house and other ervices as needed.

There is no legal right by the taule'ale'a to re-ain the land he is using for any particular period f time. The land worked by the taule"ale'a is ormally small in size.

Most of the people live on the coastal fringes of he islands. Village land normally extends from the oastline to the mountains.

Village life is communal in nature and families ssist each other. There is no problem of the aged, or example, in the sense of need for food and helter.

The soils make-up of the land; the control of and by the chiefs; the practice of giving service o the chiefs; and, the communal nature of life as resulted in definite approaches to the use of and for agricultural purposes. These can be ummarized as follows:

1. Tree crop farming is almost exclusively utilized.
2. There is a shifting method of agriculture that has been used with depleted soils abandoned and land of higher elevation is cleared while depleted soils are rejuvenated over a period of time.
3. Because of the indefiniteness in the control of land and the communal way of life the application of effort in intensively utilizing the land, has been limited.

Since Independence and until recently, customary (village) land could not be leased. Legislation has been passed recently which allows cutsomary land to be leased but not to taule'ale'a (the untitled).

This then is the framework upon which the subsistence as well as the export agriculture has been developed in Western Samoa.

The notable exceptions to the village agriculture approach are the Western Samoa Trust Estates Corporation (WSTEC) which controls some 25,000 acres of what was formerly German land as a semi-independent government corporation and a limited number of independent planters. WSTEC and the independents, however, are responsible for only 10% to 20% of the export value of crops.

Major Income Sources

Copra has been the major source of export income. Cocoa became a major export earner in the 1940's when for the first time export income from this crop exceeded £100,000 (£122,596 in 1942) and surpassed £400,000 (£448,794 in 1947) during that decade.

Banana exports began in 1928 but did not exceed £100,000 in export income until 1953 (£262,348).

Historically speaking, copra has been king in Western Samoa. During the last 55 years the value of cocoa exports has exceeded copra exports only four times (1951, 1953, 1958 and 1962). Banana exports have exceeded copra exports only twice (1958 and 1962).

In 1965 exports of copra totalled some £839,138 while cocoa exports were £450,450 and banana exports £609,873. Exports of other produce totalled £104,962. The bunchy top disease continued to wreck havoc on banana production while copra exports were down somewhat because of a carry-over of a large shipment into 1966 due to a shipping accident. There was also a large carry-over of cocoa stocks.

Hurricane

Although Western Samoa is out of the hurricane belt, in late January 1966 a hurricane caused severe damage to agriculture crops with bananas suffering the greatest damage followed by cocoa and copra. The hurricane set the economy of Western Samoa back severely causing considerable loss in income and creating a shortage of food. 1966 exports of bananas and cocoa are down sharply with bananas down to about one fourth of normal exports. Although coconut trees suffered damage, the lack of income from the other two traditional crops has stimulated the sale of coconuts, which may have been discarded or eaten, for copra. Copra exports are expected to be near normal in 1966. A small but growing export market in agricultural produce, other than the "big 3" was being developed to New Zealand and American Samoa before the hurricane. The major export item was taro but also included were pawpaw, coffee, mangoes, avocados, fresh coconuts, anatto, ta'amu and limes.

The economic effect of the hurricane will not only be felt in 1966 but will also have a reverberating effect, on a declining scale, through 1967.*

Diversification

The Government realizing that only three eggs in its economic basket jeopardizes the economy, not only from the lack of diversification point of view but also from the point of view of limited income, has made efforts to develop the visitor industry as well as secondary industry.

Government has had a study made of the potential of the visitor industry by international consultants. It has offered to assist in the first ne major hotel development by participating as a investor. It has passed an Enterprises Incentive Act which gives an income tax holiday, duty fre imports and other incentives to new or expanding hotels, visitor facilities and secondary industry.

Incentives benefits have been granted for a 40-room hotel expansion; a soft drink bottling factory; an ice cream manufacturing plant; two garment manufacturing plants; a timber mill; and a biscuit factory.

There are a number of additional opportunitie for secondary industry development and the Department of Economic Development is pursuing them with private investors. Included among the additional opportunities are timber milling, fish canning and tropical fruit processing. Some industrial operations such as soft drink and ice cream manufacture are essentially limited to a small local market. Others such as garment manufacturing and food processing have vast export market potential if properly developed and promoted.

Population & Per Capita Income

In obtaining an overall view of the economic situation the effect of population increase is also a factor relative to the increase in personal income. During the period 1956-1961 the population increased at a rate of almost 3.9% per year. With out-migration the net increase was some 3.3%. This is a continuous and increasing pressure on the national capability for the production and distribution of goods and services. There is little question, however, that per capita, money income has increased although it is certainly not adequate. This is largely the effect of cocoa becoming an additional major income producer in the 1940s and bananas in the 1950s.

Per capita income before the storm was some £27 (about $75). This leaves little for savings and capital accumulation.

Improved Living Standards

By modern standards the life of the average Samoans has improved. Additional money income both from produce earnings as well as personal receipts from overseas has increased in recent years. This has allowed for purchase of food and other consumption items as well as some durables which the average Samoan could not afford 15 years ago.

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*A more thorough analysis of trade as well as the economic effects of the hurricane is given in other sections of this report.

Further, the development of roads and village water supply systems has considerably improved the mobility and village life of the average Samoan. Where as before, because of the lack of roads, many had to travel by foot or by fautasi (canoe) to reach urban areas, there is now access to the main road to Apia by almost every village on Upolu and road access to wharves for inter-island boats to Upolu on Savai'i.

It is true that much of the so-called main roads in Western Samoa may not pass as even good rural roads in more developed areas. Nevertheless, it is a considerable improvement in mobility in Western Samoa. The urban area of Apia is not only made more accessible to visit but greater advantage is taken of the facilities available there. For example, more individuals are able to seek medical assistance in the general hospital.

The development of a one outlet water supply for an entire village may not seem much by modern standards but to villagers who have had to walk some distance for drinking water, this is a considerable advancement.

Growth In Balance

Western Samoa has a growing population with growing aspirations in education, health, water, power, road and the other aspects of development. The nation is limited in its ability to finance such development particularly with the increasing burden of a growing population. *The nation is also limited in its capacity to borrow for such development and there is general acceptance that the nation's economic base must be expanded and diversified in order to provide the means to provide the desired development. There is also growing recognition that the nation must not borrow beyond its capacity to repay and that there should be a policy of "Growth in Balance".*

Conditions Affecting Employment and Income

It is well to examine in more detail some of the factors relating to the economy of the nation and in particular their effect on employment and income.

Population

The population of the country since 1900 is indicated in Table 1. It will be noted that the population between 1900 and 1945, a period of 45 years, roughly doubled. The population again almost doubled between 1945 and 1966 a period of only 21 years. The major growth in population has taken place since Second World War. The rate of increase has not abated in recent years and considerable additional population growth is expected. The rate of survival of children is increasing.

TABLE I

CENSUS POPULATION OF WESTERN SAMOA, 1900-1961: ESTIMATES OF POPULATION FOR 5 YEAR PERIODS 1966-1986

Year	Population	% Increase	Average Annual Increase
1900	32,815		
1906	33,478	2.02 %	.3 %
1911	33,554	.23	—
1917	35,404	5.51	.9
1921	36,422	2.88	.7
1926	40,231	10.46	2.0
1936	55,946	39.06	3.3
1945	68,197	21.90	2.2
1951	84,909	24.51	3.7
1956	97,327	14.63	2.8
1961	114,427	17.57	3.3
1966 Est.	134,000	17.11	3.3
1971	159,100		
1976	188,900		
1981	224,700		
1986	267,600		

1900 to 1961 Source: Western Samoa Population Census 1961 Census Commissioner's Office, Prime Minister's Department, Apia, 1962.

Estimates for 1966 based on a 3.3% annual rate of increase.

Estimates for 1971, 1976, 1981 and 1986 based on projections by B. A. Dahlborg, Bureau of Statistics, June 1964, but adjusted for out-migration.

For example, in 1956 the proportion of children born to women between 15-29 years which survived was 87.5. This increased to 90.5 by 1961. Similar improvement was shown for children with mothers in all other age groups.

Between 1956 and 1961 population increased at the rate of 3.3% per year. At this rate of increase the population in 1966 is estimated at some 134,000 persons.

Assuming that net out-migration will be similar to the present situation, the population is expected to increase, to some 159,000 by 1971, 189,000 by 1976, 224,000 by 1981 and some 267,000 by 1986.

The racial make-up of the population is primarily Samoan. The Samoan is in fact reputed to be the purest Polynesian type. Some 101,288 or 88.5% of the population in 1961 was made up of Samoans while 11,813 or 10.3% were part-Samoans. There were only 668 Europeans, 522 other Pacific Islanders and 136 others. Most of the others were of chinese ancestry.

Out-Migration

The pressure of a growing population and the need for jobs is often alleviated by out-migration. In recent years, for example, Southern Europeans have migrated to Central Europe and Australia in pursuit of employment. Puerto Rico has had a policy of encouraging out-migration in order to relieve population pressures and to improve per capita income and general living standards at home. The Commonwealth Government of Puerto Rico has paid the fare for many thousands of Puerto Ricans to migrate to the United States.

Western Samoans traditionally had two outlets for migration, American Samoa and New Zealand. Although there is an apparent desire for many Western Samoans to migrate to seek better economic opportunities there are a number of restrictions which prevent this.

American Samoa has instituted a number of restrictions which make it very difficult for Western Samoans to reside and work in American Samoa. For example, a Western Samoan must live in American Samoa for five years before he can work in the fish canneries - the largest private employment in the Territory. These restrictions have actually caused a reversal of the out-migrati trend and there has actually been a net in-mig tion from American Samoa in 1965 and dur the first part of 1966.

Although there is free movement to New Ze land in the sense that there are no quotas, the are certain impediments which stem the mov ment of Western Samoans to that country: These includes:

1. The requirement that a male have a j before he leaves;
2. That suitable housing be pre-arranged f the migrant;
3. The problem of administering requests to e ter New Zealand resulting in a lo wait and uncertainty for the migra applicant.

Unless immigration policies change it can b concluded that for the foreseeable future th economic escape valve of out-migration will b limited and that the population pressure and th need for jobs will not be materially alleviated.

TABLE II

IN AND OUT MIGRATION OF WESTER

SAMOANS: 1955 TO 1965

Year	In	Out	Net Migratio
1965	9,827	10,301	– 474
1964	11,601	13,169	– 1,568
1963	13,129	14,988	– 1,859
1962	10,419	12,367	– 1,948
1961	6,248	6,528	– 280
1960	7,356	8,413	– 1,057
1959	7,950	8,482	– 532
1958	5,656	6,543	– 887
1957	4,566	5,322	– 756
1956	5,089	5,652	– 563
1955	4,399	4,771	– 372
	86,240	96,536	–10,296

Average Loss Per Year: – 936

Source: Government Immigration Office, Apia

Table II shows the In and Out Migration for each year between 1955 and 1965. It will be noted that there has been a net out-migration for every year during this period. Beginning in 1962 and for three consecutive years there was a net out-migration of more than 1% of the total population. There was a considerable reduction in net-out-migration in 1965. This is directly attributed to the increased restrictions on the movement of Western Samoans to American Samoa.

During the entire 11 year period there was a net out-migration of some 10,296 persons. This is some 7.7% of the total current estimated population of the country.

The net movement of Western Samoans to New Zealand, Pago Pago and elsewhere is shown in Table III. It will be noted that between 1954 and 1964 the greatest out-migration was to American Samoa. This was followed closely by New Zealand. With the imposition of restrictions, referred to earlier, there was actually a net in-migration from American Samoa in 1965. The trend is continuing in 1966 with a net in-migration of 174 persons during the first five months of 1966. This trend could continue for some time with the net effect being that Western Samoans residing in American Samoa will be returning to Western Samoa while because of the restrictions, few Western Samoans will go to American Samoa as residents.

The net out-migration to New Zealand is running ahead of 1965 and during the first five month of 1966 there was a net out-migration of some 423 persons. This is at a annual average of some 1,000.

Net out-migration to Pago Pago cannot be counted out as an economic escape valve. Migration to New Zealand is not expected to change conside-ably unless the increasing need for labour by industry in that country is reflected in the easing of immigration restrictions.

The conclusion is that Western Samoa cannot count on out-migration to alleviate its job need and population problems and must take this factor into consideration in planning for the development of it economy.

TABLE III

NET MIGRATION OF WESTERN SAMOANS

1954-1965

Period or Year	NET MIGRATION TO:			
	New Zealand	Pago Pago	Else-where	Total
1966 (5 mths.)	– 423	+ 174	– 56	– 305
1965 (5 mths.)	– 260	+ 162	– 31	– 129
1965	– 584	+ 179	– 69	– 474
1964	– 236	– 1,308	– 24	– 1,568
1963	– 677	– 1,175	– 7	– 1,859
1962	– 1,087	– 821	+60	– 1,948
1954-1961	– 2,305	– 2,267	– 57	– 4,629

Labour Force

There is no valid data available on the size of the labour force and unemploment in Western Samoa. The overwhelming majority of employed individuals work in village agriculture on customary land which is neither owned nor leased. There is little question that there is under-employment in village agriculture in the sense that much less than an average of 40 hours a week is spent by the average Samoan in working on village plantations during the year. The tree crops of coconuts and cocoa take little offort with village farming methods. The cultivation of bananas takes somewhat more effort.

There is no national employment office where statistics on those seeking employment are collected. There are actually only limited opportunities for full time employment outside of village agriculture. The Government is the biggest single employer with some 2,250 employees in 1966. This is roughly one fourth of all non-agricultural employment. Employment in commercial activity in Apia is limited.

Table IV compares the economically active population between the census years of 1956 and 1961. It will be noted that roughly the same proportion, some 63% of the economically active were in village agriculture in 1956 and 1961. The proportion as well as the number in (other than village agriculture) farming on privately owned or leased land, dropped during this 5 year period. In 1956 some 8.8% of the economically active population was in "other agriculture" while in 1961 this fell to 6.3%. The total in "other agriculture" in 1956 was 2,090 and by 1961 it fell to 1,732.

The figures on Government and administration are deceiving since Government employment is spread among a number of categories. There has been a steady increase in total Government employment over the years. For example, in 1962 Government employment was 2,090 while in the beginning of 1966 there were 2,246 employees with an additional 19 new hires called for in the budget.

Commerce has shown the greatest proportional increase in Table IV from 5.8% to 7.8% of the economically active population. A survey in late May 1966, of 16 commercial firms, employing some 1,200, showed a 7% reduction in employment as a result of the hurricane. These firms planned an additional 3% reduction in employment or a total reduction of 10% of their work force.

Between 1956 and 1961 total non-agricultural employment increased from 27.5% to 30.5% of the economically active population. This was primarily due to the reduction in the number employed in "other agriculture".

The total number of economicallly active persons on agriculture between 1956 and 1961 increased from 17,280 to 19,148 while those in non-agriculture increased from 6,546 to 8,396.

Within this 5 year period the economically active population increased from 23,826 to 27,544. This is an increase of 11.6% while the male population between the economically active ages of 15-64 increased by 11.0%.

The trend has been for fewer people to work on free hold and leased land which suggests that village agriculture must take on the increasing burden of agricultural employment and production.

Employment in commerce and government has shown a sharp increase with total non-agricultural employment increasing by 28% while agricultural employment has increased by only 11%, the trend is for relatively more non-agriculture employment.

Principal Occupations

Table V shows a comparison of the principal occupations of the employed between 1961 and 1956. It will be noted that there have been decreases in the number of labourers in both agriculture and manufacturing construction. There was a significant decrease in the nmber of agricultural planters, proprietors, managers, foremen and overseers from 514 in 1956 to 166 in 1961. There was also a reduction in the number of proprietors, managers and foremen in commerce (from 360 in 1956 to 205 in 1961).

All other categories showed increases with the principal gains being made by the manufacturing and construction trades (738 to 1,170 in 1961), teachers (845 in 1956 to 1,071 in 1961), drivers (299 to 487), saleswomen and shop assistants (148 to 317) and labourers in commerce (303 to 481).

Individuals in the construction trades and construction labour would be primarily employd in the Public Works Department of Government.

Significant is the marked reduction in the number of planters, proprietors, etc. in other than village agriculture and the reduction in agricultural labourers on such farms. Agricultural production figures are not available but it appears that more of the burden for agricultural production has shifted from independent planters to village production.

TABLE IV

ECONOMICALLY ACTIVE POPULATION: 1961 AND 1956

	1961				1956			
Agriculture	Male	Female	Total	%	Male	Female	Total	%
Village Agriculture	17,416	a)	17,416	63.2	15,190	a)	15,190	63.7
Other Agriculture	1,335	397	1,732	6.3	1,657	433	2,090	8.8
Total Agriculture	18,751	397	19,148	69.5	16,847	433	17,250	72.5
Manufacturing and Construction	1,611	105	1,716	6.2	1,189	48	1,237	5.2
Commerce (wholesaling, retailing, distribution, banking and insurance)	1,683	482	2,165	7.8	1,073	305	1,378	5.8
Transportation and Communications	725	28	753	2.7	632	13	645	2.7
Entertainment and Service (hotel, cafe, restaurant, boardinghouse, club, cinema and other)	131	578	709	2.6	101	375	476	1.9
Government and Administration	772	102	874	3.3	823	99	922	4.1
Professions (mostly government)	1,226	953	2,179	7.9	1,103	785	1,888	7.9
Total Non-Agriculture:	6,148	2,248	8,396	30.5	4,921	1,625	6,546	27.5
Total Employed:	24,899	2,645	27,544	100%	21,768	2,058	23,826	100%

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a) Village women are classified as home-makers although almost all village women assist in village agricultural production. There were 22,454 women classified as home-makers in 1961.

Source: Adapted from 1956 and 1961 Population Census

TABLE V

PRINCIPAL OCCUPATION WITHIN INDUSTRY GROUPS OF MALES AND FEMALES, 1961 AND 1956

Occupation and Industry Group	Total Persons Engaged	
MALES	1961	1956
Agriculture: Labourer	1,037	1,089
Manufacturing and Construction: Carpenter, bricklayer, plumber, painter, electrician	830	538
Professions: Clergyman, including pastor, catechist, and mission personnel	617	568
Professions: Teacher	499	368
Transport and Communication: Bus truck, taxi diver	487	299
Commerce: Labourer	481	303
Commerce: Salesman, shop assistant	401	—
Manufacturing and Construction: Mechanic, boatbuilder, ship's carpenter, sailmaker, blacksmith	340	205
Commerce: Accountant, bookkeeper, cashier, clerk	295	—
Government and Administration, and Protective Services: Accountant, bookkeeper, cashier, clerk	250	—
Manufacturing and Contstruction: Labourer	233	275
Commerce: Proprietor, manager, foreman	205	360
Agriculture: Planter, proprietor, manager, foreman, overseer	166	514
Government and Administration, and Protective Services: Police and gaol personnel	162	—
FEMALES		
Professions: Teacher	572	477
Entertainment and Service: Domestic servant, gardner, launderers or drycleaners	453	292
Agriculture: Labourer	388	395
Commerce: Saleswoman, shop assistant	317	148
Professions: *Nurse*	270	268
Professions: Missionary, pastor, other mission personnel	106	—
Government and Administration, and Protective Services: Bookkeeper, cashier, typist, stenographer, clerk	89	—
Entertainment and Service: Cook	88	—
Manufacturing and Construction: Tailor, dressmaker	65	—

Source: 1956 and 1961 Population Census

Population Growth and Resulting Job and Investment Needs

The wealth of a nation depends on the wealth of its people spread in such a way that all have an opportunity to benefit and lead a fruitful life.

The inherent dignity in man is such that he overwhelmingly prefers the opportunity for making his own economic way in life. Stated in another way, what the average individual wants is the opportunity for empolyment and a resultant income which will permit him and those for whom he is responsible to live in a dignified way. Modern as well as historical evidence indicates that where man is not given the opportunity for gainful employment he degenerates and becomes a problem to himself, the state as well as those around him. Several generations of such individuals in sufficient numbers severely saps the fibre and strength of a people.

The most effective way of looking at economic development needs of the nation is to determine jobs needs and to estimate what it will take to gainfully employ those who will be seeking work. When a nation's people is gainfully employed and the economy is in a healthy state the needs for education, health, roads, power, water come within reach. When a nation's people is unemployed, under-employed or inefficiently employed the economy cannot be in a healthy state. The result is a continuous hand stretched out palm up - asking for foreign help and a strong competition within the country for the biggest slice of a small economic pie that is not large enough to adequately provide for any of the basic economic needs of the nation.

Table VI summarizes the estimated population rowth; the number of jobs that must be created to rovide employment for those who reach working ge; and, the estimated investment needed to provide those jobs.

From the estimated population growth it is conservatively assumed that there will be a net out-migration of 2,000 for each five year period to 985. Out-migration could be considerably higher depending on the immigration policies of American Samoa and New Zealand. After the 1966 census figures are known a new base for projecting population can be used. Available information ndicates that the birth rate is continuing at a high level and that the extent of the need to provide jobs in the 1980's for those born in the 1960's will not be curtailed by lower birth rates. The more immediate problem is to provide employment for those born in the 1940's and 1950's. There is accurate information on the number of hese individuals and the number of jobs needed can in turn be closely determined.

A failure to meet employment needs will be reflected in increasing social and political problems.

The information in Table VI reflects a higher proportion of females seeking employment between 1966-1971 than previously. It is also assumed that there will be a shift of employment from village agriculture to other employment sectors at the rate of 1% for each five year period. This rate of change is the experience in Western Samoa in recent years.

From 1966-1971 there will be an estimated addition to the labour force of 7,530 Samoans. It is estimated that some 3,750 of this number will seek employment in industry and services. The remainder to continue primarily in traditional village agriculture.

By the 1971-1976 period the additional number of people seeking employment will increase to some 8,540. This is the result of the high birth rate in the 1950's. Some 4,440 are estimated to be needed outside of agriculture with 4,100 becoming economically active in agriculture.

During the 1976-1980 five year period new jobs must be found for 9,140 individuals with an estimated 4,970 outside of agriculture.

Between 1981 and 1985 an estimated additional 11,280 jobs will have to be found for those reaching working age with an estimated 6,230 of this number seeking employment outside of village agriculture.

For the 20 year period from 1966-1985 it is estimated that some 36,500 jobs will have to be created for maturing young people entering the labour force.

New jobs do not, of course, just happen they are created by investment of capital in economic activity. Government employment is based not on its own economic activity but on the wealth creating basic economic activity of the nation. In other words, employment in Government is based on revenues which are obtained from taxes on the economic activity of the nation. If economic activity is low, government revenues will be low.

Pressures on government to provide for education, health, roads, power, water, etc. are bound to be ineffective and meaningless, if the economy is not strong enough to be taxed so that sufficient revenues are obtained for such developments.

Economic activity depends on capital investment, know-how, land and labour. The land and the labour are available in Western Samoa. What is primarily needed are capital and know-how.

Unfortunately, because of the low per capita income in Western Samoa there is little capital accumulation for investment. Sufficient available capital for investment in secondary industry is in the hands of a few businessmen - most of whom have invested as much as they can in new enterprises. It is fairly obvious that most of the capital needed must come from overseas.

Based on current experience it has been conservatively estimated that it will take an average of some £2,000 per job in secondary industry (including the hotel industry). Some new enterprises will invest considerably more than this amount for each job created. For example, a new first-class 100-room hotel will have an investment of some £5,000 per job. The Potlach Forests Inc. forest development proposal includes an invesment of some £5,330 per job. On the lower side the expansion of Aggie Grey's hotel is at a rate of some £2,500 per job; a new bottling plant has an investment of some £1,800 per employee; an ice

TABLE VI

ESTIMATED POPULATION GROWTH AND JOB AND INVESTMENT NEEDS: 1966-1986

ITEM	1966-1970	1971-1975	1976-1980	1981-1985	1966-1985
Estimated population at end of each period (no out-migration)	161,100	190,900	226,700	269,600	—
Assumed net out-migration	2,000	2,000	2,000	2,000	8,000
Estimated population at the end of each period a)	159,100	188,900	224,700	267,600	267,600
Number of new jobs needed	7,530	8,540	9,140	11,280	36,490
Number of which in industry and services	3,750	4,440	4,970	6,230	19,390
Investment in: Industry	2,500,000	3,000,000	3,500,000	4,000,000	13,000,000
Services	2,500,000	2,940,000	3,220,000	4,230,000	12,890,000
Agriculture	1,320,000	1,435,000	1,460,000	1,770,000	5,985,000
Total investment during each period:	6,320,000	7,375,000	8,180,000	10,000,000	31,875,000
Average annual investment during period:	1,260,000	1,480,000	1,640,000	2,000,000	1,540,000

a) Estimated population in 1966 equals 134,300 persons

TABLE VII

NUMBER OF JOBS NEEDED: BY EMPLOYMENT SECTOR: 1966-1985

	1966-1970	1971-1975	1976-1980	1981-1985	1966-1985
Industry and Hotel development	1,250	1,500	1,750	2,000	6,500
Services	2,500	2,940	3,220	4,230	12,890
SUB-TOTAL	3,750	4,440	4,970	6,230	19,390
Agriculture	3,780	4,100	4,170	5,050	17,100
TOTAL:	7,530	8,540	9,140	11,280	36,490
Ratio of Basic Industry Jobs to Service Jobs:	1:2	1:1.9	1:1.84	1:2.1	1:1.98

cream plant at a little over £1,000 per new job.

It is assumed that an average of some £1,000 investment per job will be needed - for service employment and £350 per new individual engaged in agriculture. The agricultural per job investment figure is based on an average investment per acre from Department of Agriculture figures on various types of agricultural activity as related to the ratio of the number of acres to labour force.

As shown in Table VI the estimated investment needed to create 7,530 new jobs in industry, services, and agriculture between 1966-1970 totals some £6,320,000. This is an average of some £1,264,000 per year.

For the period 1971-1975 the total investment needed to create some 8,500 jobs is estimated at £7,375,000 or an annual average of £1,475,000.

Between 1976-1980 the total investment needed will be some £8,180,000 and for the five year period 1981-1985 some £10million or an average of £2million per year for the latter period.

For the 20 year period between 1966-1985 employment for some 36,500 new entrants into the labour force will be needed. It is estimated that an investment in new enterprise of almost £32million is necessary to create this employment.

Immensity of Problem and Base Ratio Theory

The immensity of the problem of providing additional employment for 36,5000 individuals in 10 years and the investment of almost £32million to create such employment leads to the question of whether Western Samoa has any chance at all of meeting its basic needs.

Fortunately, invesment which creates jobs in basic industry has the propensity for creating jobs in service industry. Thus the creation of a base job in hotel or secondary industry automatically stimulates the creation of additional jobs in service industry.

Studies have shown that over the long run the ratio of base jobs to service jobs is 1:2 - that is for each base job in industry two jobs are created in services. The estimate of job needs for industry and hotel development in Western Samoa was based on an empirical approach which assumed a 1% increase in employment outside of agriculture for each five year period as well as an evaluation of the jobs resulting from the likely projects that will be instituted in Western Samoa for the five year period 1966-1970. It was also assumed that an additional 250 jobs will be established in industry for each succeeding five year period. The remaining number of non-agricultural jobs were considered a part of the services employment sector. This breakdown is shown in Table VII.

The ratio of base jobs to service employment equals almost 1:2 over the 20 year period.This is a check on the estimates made and supports the ratio relationship indicated between basic jobs and service jobs.

The relationship of basic employment (B) to service employment (S) can vary for specific communities. For example, there may be a much higher ratio of S to B employment in such cities as Wellington, New Zealand or Washington D.C., U.S.A., where there is a great number of professional and clerical workers employed by government. Similarly, a community which is highly industrialized may have a bigger ratio of B to S at least for a time. As a community matures, however, there is a tendency for S to increase relative to B.

The base ratio theory approach also incorporates the population (P) that is supported by the employment created. Thus there is a direct relationship between B - basic employment, S - service employment, TE - total employment and P - population.

As an example we shall assume that the community has the following ratios:

	Ratio to B
B = 1,000 employees	1
S = 2,000 employees	2
TE = 3,000 employees	3
P = 6,000 employees	6

Thus the dynamics of the base ratio theory are such that the creation of a job in B stimulates the creation of 2 jobs in S resulting in a TE of 3 and the support of six persons in P.

In the short run let us assume that a number of new enterprises are started which show an initial increase in B as follows:

B = 2,000 employees TE = 4,000 employees
S = 2,000 employees P = 8,000 persons

In the long run the adjustment assumed by the base ratio theory is that there is a return to the ratios in existence before the rise in B as follows:

B = 2,000 employees TE = 6,000 employees
S = 4,000 employees P = 12,000 persons

If there is a reduction in B then there is a negative reaction directly opposite to that shown.

The importance of the base ratio theory is in its dynamics. It is important to recognize that creation of B (basic jobs) has the effect of creating employment in S (service jobs) and supporting population (P).

Applying the base ratio theory to the projected B (base jobs) and S (service employment) needed for Western Samoa will also indicate the (P) population that will be supported should such B jobs be created.

Thus as can be seen in table VIII a population of some 39,000 can be supported by the employment created in industry and services. Actually with the aiga (family) system it could be assumed that a higher ratio of population can be supported to employment created.

The base ratio theory assumes that the impetus for change comes from B. There is little question that B employment is the main basis for the creation of S. The effect of real income change in S independent of B is a question as is the distribution of real income changes, income elasticity and the propensity to consume by B employment.

Despite the lack of perfection in the base ratio theory approach, and what economic theory is not subject to limitation, *there is little question that if Western Samoa is successful in stimulating the creation of jobs in B there will be a snowball effect which results in a turnover of income spent by B workers which creates S employment and supports (P) population.*

TABLE VIII

APPLICATION OF BASE RATIO THEORY TO NUMBER OF JOBS NEEDED: 1966-1985

	1966-1970	1971-1975	1976-1980	1981-1985	1966-1985
(B) Industry and Hotel Development	1,250	1,500	1,750	2,000	6,500
(S) Services	2,500	2,940	3,220	4,230	12,890
(TE) Total Eployment	3,750	4,440	4,970	6,230	19,390
(TP) Total Population	7,500	8,880	9,940	12,460	38,780
Base Ratios:					
B	1	1	1	1	1
S	1:2	1:1.96	1:1.84	1:2.12	1:1.48
TE	1:3	1:2.93	1:2.84	1:3.12	1:2.98
P	1:6	1:5.92	1:5.67	1:6.23	1:5.97

The question of whether the base ratio theory can be applied to agriculture can logicaly be asked. The base ratio theory has not, in fact, been utilized to determine the effect of agricultural employment. There is little question that, theoretically speaking, employment and income created by agriculture will have an effect on service employment. The fact, however, is that in Western Samoa the per capita income by village planters is so small that its positive effect is limited relative to non-agricultural basic employment.

It can be concluded that although the problem of creating some 36,500 jobs and an estimated direct investment in new and expanding enterprise of about £32million is immense, the creation of the basic employment in industry and hotels will stimulate the creation of income as well as capital accumulation which will result in service jobs being created and the support of the nation's growing population.

Village children at school

Sisters

A School dancing party

Girls making ula

MARKETS

Two of Western Samoa's three primary export products, copra and cocoa have wide potential narkets. The third major export, bananas is marketed exclusively in New Zealand. The development of taro as an export product to New Zealand's Samoan population as well as to American Samoa, has been growing. In addition, a number of other products such as coffee, coconuts, pawpaws and mangoes, although limited in volume, have been sold primarily in the New Zealand market.

The cocoa and copra markets shift from year to year depending, to a great extent, on where the highest price can be obtained at the time of sale and the availability of shipping. An indication of this shifting is shown by tables IX and X comparing exports between 1962-1965.

TABLE IX

COCOA EXPORTS BY IMPORTING COUNTRY: 1962—1965

ountry	1962	1963	1964	1965
	£	£	£	£
nited Kingdom	586,674	264,2[illegible]3	157,748	143,470
ustralia	29,547	24,490	25,435	11,741
ew Zealand	17,373	23,972	81,602	13,855
est Germany	352,905	339,764	187,786	253,712
etherlands	39,224	1,114	36,014	10,057
nited States	146,977	173,123	210,428	15,140
aly	—	2,079	—	2,475
apan	—	—	12,715	—
outh Africa	3,218	—	—	—
	£1,157,918	£828,815	£711,228	£450,450
OTAL TONNAGE:	5,258	4,324	4,480	2,991

Table IX shows cocoa exports by importing ountry. It will be noted that the United Kingom, West Germany and the United States have raditionally been major markets for Western amoa's flavoured cocoa. After reaching a high n 1964 when it was the major importer of cocoa rom Western Samoa, the United States market ell to £15,140 in 1965. The fluctuations in cocoa eceipts are primarily due to world market prices lthough a difference in volume of cocoa exports lso had an effect. For example, in 1965 only 2,991 tons of cocoa was shipped but there was a carry over of some 1,150 tons in stocks.

As for copra markets the United Kingdom was the major importer in 1962 and 1963, West Germany in 1964 and the Netherlands in 1965 as shown in Table X. Although West Germany was the biggest market in 1964 it did not take any copra in 1965. There have been steady copra sales to New Zealand.

Copra tonnage exports fluctuated from a high of 15,301 tons in 1964 to a low of 12,370 tons in

TABLE X

COPRA EXPORTS BY IMPORTING COUNTRY: 1962—1965

Country	1962	1963	1964	1965
	£	£	£	£
United Kingdom	314,553	390,108	241,128	157,211
New Zealand	202,106	203,781	226,153	224,786
Netherlands	—	—	46,225	311,302
West Germany	—	103,803	321,960	—
Japan	78,634	101,068	409	67,343
Venezuela	25,919	—	77,254	21,272
Panama	—	—	6,975	—
Columbia	33,693	72,662	—	—
Denmark	—	—	—	57,224
	£654,905	£871,422	£920,104	£839,138
TOTAL TONNAGE:	12,806	15,197	15,301	12,370

1965. The effect of world market prices is seen by the almost equal production in 1962 (12,806 tons) and 1965 (12,370 tons) but a considerable difference in returns (£654,905 in 1962 and £839,138 in 1965).

Table XI shows banana exports for the 1962-1965 period. Commercial banana exports are almost exclusively to New Zealand with exports to other areas being primarily test shipments. The price for bananas is steady and the downward trend between 1962 and 1965 is directly attributable to lower production as a result of disease. The export of banana cases during the four year period declined as follows:

1962 - 760,935 cases
1963 - 687,095 cases
1964 - 646,170 cases
1965 - 481,565 cases

The banana industry in Western Samoa is now undergoing a somewhat desperate redevelopment. There is an effort being made to kill out bunchy top disease, in particular areas, with banana bearing trees being destroyed followed by replanting and then adequate policing to prevent re-infestation. It will be a considerable time before this industry can reach the 1962 export level. There are, however, potential markets in Japan and Canada and a limited export market can be

TABLE XI

BANANA EXPORTS: 1962—1965

Country	1962	1963	1964	1965
	£	£	£	£
New Zealand	897,994	822,526	789,088	609,873
American Samoa	—	—	241	313
Canada	—	1,807	1,488	—
Japan	10,104	—	—	—
	£908,098	£824,964	£790,817	£610,186

developed to American Samoa. The New Zealand market, although a growing one, is limited in its capacity to take on the potential exports of South Pacific countries and territories. In addition to Western Samoa , Fiji, Tonga and the Cooks Islands, are other South Pacific Island shippers of bananas to New Zealand.

Tonga, although a relatively small shipper, has pioneered the development of an export market to Japan.

Several of the South Pacific banana producers have loosely banded together to form a Pacific Islands Producers Secretariat. Included in this organization are Western Samoa, Fiji, the Cook Islands and Tonga. The initial impetus in forming this organization was to exchange information in bargaining with their primary market outlet Fruit Distributors Limited of New Zealand. One of the stated purposes of the organization is to co-operate in the marketing of bananas to other areas when production increases to justify such additional market development. Further, in the long term, the members of PIPS foresee a co-operative approach in marketing other products. Western Samoa is acting as the Secretariat for PIPS. There has been some discussion concerning the employment of a full time Secretary for PIPS but this has yet to be agreed on.

Exports of other items are shown in Table XII. There was a considerable increase in shipments of produce in 1965 over 1964. In 1964 exports of produce totalled £41,975. By 1965 this had increased two and one half times to £104,962. As previously indicated this consisted primarily of taro exports but also included pawpaws, fresh coconuts, mangoes, avocados, anatto and small shipments of other tropical products.

TABLE XII

OTHER EXPORTS BY IMPORTING COUNTRY: 1962—1965—(IN£)

Country		1962	1963	1964	1965
New Zealand:	Coffee	5,618	100	—	2,096
	Timber	—	429	2,694	406
	Salted Hides	2,518	1,995	2,170	513
	Other Produce	8,225	4,554	15,412	52,284
American Samoa:	Furniture	—	—	244	17,625
	Timber	—	22	—	377
	Other Produce	13,669	21,228	26,179	49,113
United States:	Timber	192	83	178	128
	Other Produce	280	24	29	653
Japan:	Other Produce	—	12	50	432
Canada:	Other Produce	—	127	—	54
Other Countries:	All Exports	37	31	295	2,480
TOTAL OTHER EXPORTS		30,189	28,583	47,521	126,221
RE-EXPORTS		47,811	37,900	31,602	53,406

There was an export of some locally made furniture. This furniture was made in the Public Works Department joinery shop.

Table XIII gives a breakdown of shipments of other produce through the Marketing Division of the Department of Agriculture in 1965. Additional shipments, particularly of taro, were made independent of the Department of Agriculture.

Other than fresh coconuts (£10,080) and taro (£64,443) the only other export over £1,000 was pawpaws at £1,475. Some £973 in pickled mangoes were exported in 1965 and £694 of fresh mangoes or a total mango export of some £1,667. Although export of other items are small they have potential for expansion and taken together they provide badly needed additional export revenue. The markets for these products are Ne Zealand, American Samoa, Japan and Canad

TABLE XIII

SELECTED EXPORTS OF OTHER PRODUCE SHIPPED THROUGH MARKETING DIVISION, DEPARTMENT OF AGRICULTURE, 1965

Commodity	Quantity	Value	Market
Coconuts, unhusked	7,437 sacks	£9,880	Japan, N. Z.
Coconuts, husked	162 sacks	200	Canada
Pawpaws	2,243 bags	1,475	New Zealand
Vi	620 bags	480	"
Avocados	287 bags	311	"
Mangoes, fresh	943 bags	694	"
Mangoes, pickled	38 pails	973	"
Taro	21,202 cases	64,443	American Samoa, N. Z
Sugarcane	114 bundles	290	New Zealand
Anatto	14 sacks	293	New Zealand
		£79,039	

There is a considerable potential for increasing the export of other produce to New Zealand and American Samoa. There are also potential markets with the Polynesian population of Hawaii, and the West Coast U.S.A. In addition to the Polynesian population the eating of poi (a mashed taro mixed with water) is widely eaten by many other racial groups in Hawaii and is a recommended baby food used by all racial groups. Although Hawaii has traditionally grown its own taro the urbanization taking place there is forcing many former taro growers out of production. The Polynesian population of the West Coast U.S.A. must, of course, import taro and the declining availability from Hawaii results in a high price level.

The potential for exporting other fresh tropical products, initially to New Zealand, but eventually to other markets is also considerable. The Marketing Division of the Department of Agriculture is aware of this potential and is encouraging the export of these products. The results of this effort are shown by the increased exports in other produce in 1965. Unfortunately, the hurricane in 1966 set back these growing exports but they are expected to commence again as the overall agricultural situation improves. It is conservatively estimated that shipments of other produce can increase to some £250,000 by 1970.

Processed tropical products also have considerable potential for export. A Food Processing Industry Development Laboratory is now under contruction. Many of the products developed in the laboratory wil eventually be produced commercially . Potential markets for processed products include New Zealand, Japan, American Samoa, Canada and the United States of America.

The export of timber logs and sawn timber also has considerable potential. The primary problem is to arrive at a satisfactory legal method for utilizing the timber on customary land. If this can be done the nation can make agreements with large sized timber producers such as Potlatch Industries Inc. of the U.S.A. to enter into large scale harvesting and tree farming projects. If the land matters are cleared and the Potlatch proposal can be proceeded with the nation can look forward to logs and sawn timber exports of upwards of

£500,000 annually in the 1970's. The large potential markets include, New Zealand, Japan and the U.S.A.

The export of specialized wooden furniture has a good but limited market. The only export market thus far has been American Samoa by arrangement with the Government of that territory for use in the hotel and government establishments. The present needs of American Samoa have been met and the continuing market potential of that territory is limited. Additional specialized markets have to be developed in order to make this a limited but lucrative export. The limiting factor to any substantial increase in the export of furniture from Western Samoa is freight cost. Since furniture is a bulky item it is subject to a high freight cost per unit and this has encouraged the development of indigenous furniture manufacture all over the world. Consequently, imported furniture with a high freight cost plus customs duty cannot effectively compete in price with locally produced furniture. Specialized markets, however, can be developed with wel designed furniture made of indigenous woods such as teak. As a specialized furniture it can be sold at a considerably higher price. Another approach is to export the furniture knocked down which can then be finished and assembled by the importer. This would reduce freight cost and customs duty. There would also, of course, be less return to Western Samoa and the quality of the finished product cannot be closely controlled. Potential markets include New Zealand, Japan, Hawaii and the U.S.A.

Other potential exports include macadamia nuts bulk raw as well as packaged and candied. Western Samoa Trust Estates Corporation is the only one in Western Samoa which is pursuing the production of macadamia nuts on more than just an experimental basis. Some of the best grafted varieties have been brought in from Hawaii by the Department of Agriculture. These as well as many seedlings are growing at the Nafanua Experiment Station. Returns to the farmer per acre from this tree crop can be close to £200. It is only when the potential returns from this product are realized that a larger scale effort will be made to develop the export of macadamia nuts. Potential markets include New Zealand, Japan and the U.S.A.

Fresh pineapple export to Japan and New Zealand is also an excellent potential. Good pineapple is grown in Western Samoa but none on a commercial scale. Other export varieties should also be produced. Both New Zealand and Japan import fresh pineapple from Hawaii. There is regular shipping to both countries.

There is a potential market for the export of coffee. W.S.T.E.C. is the biggest producer as well as biggest shipper. All coffee exported thus far has gone to New Zealand. W.S.T.E.C. is now packaging coffee in small plastic packs for retail sale and will soon be test marketing in New Zealand. If such efforts are successful the value of coffee exports should increase considerably.

If energetic efforts are continued in the production and export of produce other than the "Big 3" the estimated £250,000 in exports by 1970 can be at least doubled during that decade.

Section IV

Factors Impeding Economic Growth

Western Samoa which gained its political independence in January of 1962 is emerging from a subsistence economy to a money economy. Commitments have already been made to pay back over £2million for loans. Demand for increased capital works and government services is increasing. Government has grown larger and larger and the maintenance expenditures to support such a relatively large government plant have been growing commensurately. There is no way to fall back to the old lackadaisical subsistence type economy. Not only does it need more and more money for capital and maintenance purposes but Western Samoa is in close competition with the rest of the world in the products it produces and exports.

In short Western Samoa has an economic battle on its hands. The outcome of this battle will determine whether the citizens of Western Samoa will be able to lead a fruitful life in a free society.

There are a number of factors which impede economic development or stated another way - which contribute to economic decline. Among these are the following:

1. Geographic Isolation

Western Samoa's closest neighbour is American Samoa - some eighty miles away. American Samoa is small - less than one-sixth the size of Western Samoa.

Among the Pacific Islands, Tonga is some 750 miles away and Fiji some 790 miles. New Zealand with which Western Samoa is closely linked is 1,800 miles away. Other areas include Hawaii 2,600 miles distant and Australia some 2,700 miles distant.

Such isolation results in a number of impediments to growth. Markets are distant and difficult to exploit. There is difficulty, because of the expense, for individuals to improve their education and their skills overseas. Western Samoa's economic enterprise does not have the opportunity to keep up-to-date as well as it should in improvements and advances made by others. Despite its many attributes distance and isolation contributes to the cost and difficulty of visitors coming to Western Samoa. Isolation also contributes to an insular attitude which can inhibit economic progress. In addition to isolation with the outside world, there is also isolation within Western Samoa. The major islands of Upolu and Savai'i are 13½ miles distant from each other by small launch. The overwhelming majority of the population of each of these islands has not had the opportunity to visit the other. There is not only insularity with the outside world but also within Western Samoa itself.

2. Inefficient Agriculture

The average agricultural production per acre has been lamentably low in Western Samoa. Among the reasons for this are—

(a) an agriculture that has in the past been largely based on a subsistence motivation;
(b) the lack of agricultural know-how by farmers;
(c) the lack of a sufficient number of technically trained personnel in the Department of Agriculture;
(d) the largely tree crop type of agriculture which does not necessitate much effort to keep up production;
(e) the small size of the farming unit which does not permit the efficient procedures of a larger unit and economies of scale;
(f) the lack of security of land tenure in village agriculture (which produces more than 80% of the cocoa, and more than 90% of the bananas and copra for export) retards the motivation for efficient and increased production.

3. Land Control

Some 80.5% of all land in Western Samoa is customary land in which ownership is vested in the family group (agia) under its chief (matai) and no individual owns any specific part of the land. Purely from an economic point of view, without considering the importance of social custom, such control of land inhibits the efficient use of that land. It is axiomatic that capital and effort in-put on land for which there is insecure tenure will largely be limited to the estimate of returns that will accrue to the farmer himself. On the other hand, where a planter has secure control and adequate tenure then he is bound to increase his effort and capital in-put and will inevitably result in increased efficiency and production per acre.

Not only is there not secure control and tenure by the untitled (taule'ale'a) who works the land there is also a limit placed on the control of land by the chief (matai). The control of land does not, as has been previously pointed out, pass from the chief to his male heir. Upon death of the chief a new chief is selected by the family. Further, the chief can be deposed with the control of land passing to another chief. At best there is assurance of only life time control of the land by the chief.

Recent changes in the law allow the legal leasing of customary land to chiefs but not untitled persons. Land can be leased for 20 years with a 20 year renewal (land can be tied up for forty years when lease is originally made) for agricultural purposes and for 30 years with a 30 year renewal for hotel and industrial purposes. Foreigners and titled persons can lease customary land but the untitled do not have this right.

Some 11.3% of the land in Western Samoa is owned by the government and 4.5% (some 31,800 acres) by the Western Samoa Trust Estates Corporation, a land development corporation owned by the Government. * Government land can be leased in multiples of 20 years for a maximum period of 60 years.

Only 3.7% of the land in Western Samoa is privately owned (freehold and mission owned land).

4. Lack of Capital

At an estimated per capita income (in 1964) of some £27 there is little propensity for savings i.e. capital accumulation. It has been estimated that there will be a need to invest some £32million in new and existing enterprise over the next 20 years in order to provide employment for Western Samoa's working age population. This capital is not available in Western Samoa.

The economic impediment of isolation is also related to the problem of attracting sufficient capital and know-how as Western Samoa is relatively unknown by potential investors.

5. Lack of Labour and Enterpreneurial Skills

The lack of know-how is also a big impediment to economic growth. Many of the opportunities available to Western Samoa cannot be exploited not only because there is lack of capital but simply because the knowledge to exploit such opportunities is not available here.

As an isolated community whose economy is almost entirely based on agriculture and whose agriculture is of a primitive village type Western Samoa has not had the opportunity to develop necessary labour and enterpreneurial skills. There are only a handful of Samoan University graduates in Western Samoa. Whenever a project is planned either an economic plan project by government or a secondary industry project by a businessman one of the biggest problems is to find the management and labour skills to carry out the project. Invariably recruitment must be done overseas. This is normally a slow, drawn out process which is complicated by the fact that Western Samoa's wages and salaries are considerably below international standards.

An example of the lack of managerial and technical skill is that only nine of the some nineteen directors of departments of government are Samoan citizens. Most of the others are New Zealand seconded officers.

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* W.S.T.E.C. is the successor to the pre-independence New Zealand Reparations Estates which operated land taken over from German owners in 1914.

6. Overemphasis on Government Maintenance Expenditures

In 1965 the amount budgeted for government maintenance (operating costs) was 66.6% of total overseas income (including income from invisibles as well as products). Conversely, the relative amount budgeted for development plan expenditure is low.

Western Samoa has budgeted £1. 10. 0. per capita for its development budget. Jamaica has budgeted £7. 16. 0, Malaysia £7. 3. 0. and Fiji £5. 15. 0.

As a small trading nation with little internal industry and whose income is largely earned from overseas, the nation has allowed itself only one-third of its total overseas income for expenditures on other than government maintenance. By no means is the remaining one-third spent on the investment side since some of this amount must be spent by commercial firms for operating costs, some is remitted overseas as profits by foreign firms, etc.

The extremely high government expenditures on maintenance is a big luxury which saps the country's ability to invest in activities which create employment and income.

7. Lack of Diversification

The nation has traditionally relied on three primary agricultural products for its export income. The "three eggs in one basket" concept has resulted in severe problems for the nation since all three of the economic eggs have been cracked and there is the danger that scrambled eggs will be made of the economy. The banana economic egg has been cracked wide open and the question of this primary product remaining as a major export is at stake. In order to adequately fight the insidious and fast spreading bunchy top disease the farmers themselves must be knowledgeable, well disciplined, organized and willing to kill out existing infested banana plantions. With some 5,000 shippers of bananas, most of them growing bananas on an acre or less, it is extremely difficult to control this disease.

Copra shipments have been inhibited by a reduction of productivity of coconut trees of some 20% because of rhinoceros beetle damage. Most of Western Samoa's coconut plantings are aged, the majority of trees having been planted by the Germans more than 50 years ago. As the trees get older productivity decreases and together with beetle damage the production from existing groves can be expected to continue to decrease. The windfall from the 1966 hurricane plus the lack of income from bananas and cocoa, due to hurricane damage, caused a temporary spurt in copra production but the trend is for reduced production. Efforts are now being initiated under projects in both the 1965 and five year economic plans to replant but the effect of this new planting will not be felt for many years.

Cocoa has been subject to low world market prices during the last two years. In recent months the world price for cocoa has improved considerably but because of the hurricane very little cocoa has been shipped from Western Samoa.

The vagaries of agriculture including bad weather, disease, insects and poor prices have all affected Western Samoa's three crop economy severely.

The lack of diversification has not only caused a sharp drop in income but also severely inhibits any effective government planning since severe fluctuations in revenues pre-empt long term commitments without considerable risk.

8. Limited Internal Markets

There have recently been initiated a number of small industrial enterprises which would serve the local market. These include garment manufacturing operations, a soap factory, a Coca Cola bottling plant, a biscuit factory and an ice cream plant. All of these operations were assisted with a tax moratorium and other incentives under the Enterprises Incentives Act. The local market is limited in Western Samoa not only in terms of people but also in the amounts of money that people have to spend. Although there are additional opportunities for small industry the limited size of the local market prevents the initiation of many local market oriented industrial operations that need a larger market to make investment feasible.

9. Rapidly increasing population

As already pointed out, Western Samoa's 1966 population is estimated at some 134,000 - double the population of 1945. By 1970 the population is estimated at 159,000 by the 1975 at 189,000, by 1980 at 225,000 and by 1985 at 268,000 - double the current population.

This projected population increase without the escape valve of out-migration will put considerable pressure on Western Samoa's economy. There will be pressure for schools, medical services, water services, power facilities, roads,etc. to serve this increasing population.

In addition to the pressure for increased services there will be a need to create some 36,500 new jobs for Western Samoa's growing labour force during the 20 years.

At the projected rate of population increase, it will be very difficult to substantially improve the per capita income of the people with the capital resources available in this country. Although per capita income has gone up since the 1940's and 1950's per capita income has gone down since 1962. Per capita income will continue to decrease if the population increases at a faster rate than personal income. The net effect, is of course, not an improvement, but a decline in the standard of living of the people.

Section V

Basis for Economic Growth

DIVERSIFICATION

There is general agreement that Western Samoa needs more than three eggs in its economic basket. At present, Western Samoa has an unstable economic base which must be strenghtened and made more stable by diversification. There must be diversification within agriculture as well as outside of agriculture.

1. Agricultural Import Replacement

Within agriculture there is opportunity to replace at least a portion of the fresh meats, fruits and vegetables imported into Western Samoa.

Fresh Meat

In 1965 some £84,300 in fresh and frozen meats were imported. The carrying capacity of Western Samoa's land for livestock is excellent and local producers should be encouraged to considerably reduce this import. Consideration should be given to increase the import duty on fresh and frozen meats in order to encourage local production.

Fishing

The waters of Western Samoa abound with fish. Yet there is no commercial fishing and almost all of what is caught is sold hanging off a tree along Beach Road in Apia. In 1965, £20,445 of fresh and frozen fish were imported. There is certainly room for limited commercial fishing as well as wholesaling and retailing of fresh fish.

Fresh Vegetables

In 1965 some £23,000 of fresh vegetables were imported. Some of the temperate climate vegetables cannot be grown here but many others can. For example, good lettuce and tomatoes are now grown in Western Samoa. Experimental growing is now being undertaken at a number of secondary schools under an economic development plan project. Some of the experiments are of interest for import replacement of imported fruits and vegetables. The information developed should be widely disseminated by the Department of Agriculture and encouragement and assistance should be given to qualified growers.

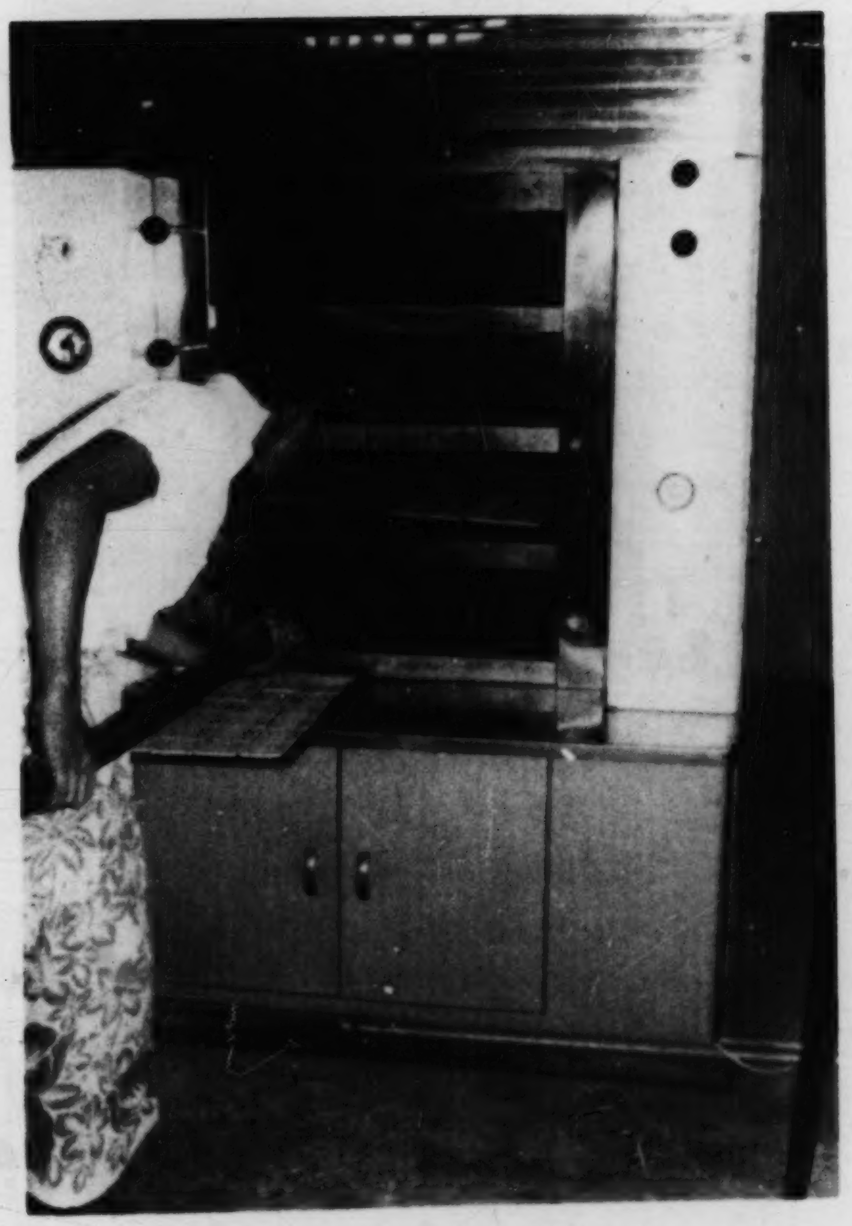
Fresh Fruit

Fresh and frozen fruit imports are more limited than fresh vegetables, and totalled some £8,126 in 1965 with an additional £4,627 in packaged fruits. Excellent fruit is grown in Western Samoa which can replace a good portion of temperate fruit imports if they are grown and marketed on a commercial basis. Superior tropical fruits such as pawpaws, pineapple, mangoes, avocados, and semi-tropical quality fruits such as grapefruit, oranges and limes are grown on higher elevations.

Coffee and Cocoa

Despite a number of small coffee producers some £4,308 in coffee was imported in 1965. Western Samoa does not, of course, produce instant coffee but consumers should be encouraged to utilize Samoan grown coffee to assist in the development of the country. The same is true of cocoa. Samoan cocoa is, of course, not finely processed as imported cocoa. Nevertheless a good cocoa can be made and with a little effort the crude processing can be improved and along with some sales effort, at least some of the imports can be replaced. As was pointed out in the 1965 Economic Plan report, the consumers in Western Samoa should be urged to "Buy Samoa". The Department of Economic Development has initiated a limited promotional programme urging people to buy locally grown and processed products.

Power machine operators in new garment factory



A new biscuit factory

Samples of Samoan products

A curio shop

2. Agricultural Exports

The opportunities for additional and more diversified agricultural exports have already been indicated in another section of this Plan report. The Marketing Division of the Department of Agriculture has developed a lucrative market for taro in New Zealand and American Samoa with additional opportunities for exporting this product to other concentrations of Polynesian population.

Fresh Tropical Products

There is opportunity for exporting a whole variety of tropical products. They must first be commercially grown, efficiently handled, packaged and shipped. The State of Hawaii air freights huge quantities of pawpaws to the Mainland United States after treatment. Pawpaws can be grown cheaper in Western Samoa than Hawaii. Efforts should be made to obtain special air freight rates from air carriers as well as ocean shipping companies in order to encourage the export of the tropical products grown in Western Samoa as well as those which can be potentially grown here. Again in the first instance encouragement must be given to commercial growers to initiate operations. Unless commercial production is started, the quantity and quality of the shipments will be volatile. No secure or even moderate sized markets can be built on this basis.

The government can encourage commercial production by -

(a) assisting interested growers with technical help by the Department of Agriculture;
(b) acquiring and providing the best planting material at cost;
(c) where possible leasing government land to commercial producers;
(d) assisting commercial producers with agricultural loans through the Development Branch of the Bank of Western Samoa.

3. Processing and Manufacturing

There are a number of opportunities for additional processing and manufacturing operations for both import markets. Because of the limited local market the real potential is in overseas markets.

Tropical Fruit Processing For Export:

The commercial processing of tropical agricultural products offers considerable opportunity. With the completion of the Food Processing Industry Development Laboratory - 1965 Economic Plan project - this potential will be brought closer to reality. Mr Laurie Lynch with whom the government has contracted to head the laboratory is a top man in this field.

Examples of potential export tropical processed products include:

1. Guava juice (frozen, hot-pack, concentrates and nectars)
2. Passionfruit juice (frozen, hot-pack, concentrates and nectars)
3. Passionfruit juice and orange juice combination mix
4. Pawpaw juice
5. Canned pawpaw
6. Canned tropical fruit cocktail using bananas, pineapple, pawpaw, mangoes
7. Jams and jellies from tropical fruits
8. Canned bananas
9. Canned mangoes
10. Coffee processing
11. Macadamia nut processing
12. Coconut chips
13. Coconut syrup
14. Taro chips

The Food Processing Laboratory will not only develop the commercial processed products but will also assist commercial processors in setting up their production line as well as in the solving of production and packaging problems when in full operation.

Outside of the export tropical processed foods field there is the opportunity for processing additional food products for the local market.

Corned Beef Packing - Local Consumption

For example, in 1965 there was almost £200,000 of canned corned beef imported by Western Samoa.

This is a high volume item and might support a factory operation strictly for local consumption. An economic feasibility study is needed in addition to the technical development work of the Food Processing Laboratory.

Fish Canning - Local and Export Markets

Another potential processed food product is canned fish. This operation could be both local market and export market oriented. In 1965 some £135,000 of canned fish was imported - primarily canned herring from South Africa. American Samoa has two successful fish canneries which ship tuna fish to the United States.

Western Samoa's wage rate structure is considerably lower than American Samoa's. In addition Western Samoa ca offer a cannery operator an initial tax moratorium of five years as well as other benefits under its Enterprises Incentives Act. The Department of Economic Development has been pursuing the establishment of a fish cannery in Western Samoa can offer a cannery operator an initerest shown by overseas investors. The establishment of a fish cannery will result in the employment of several hundred people.

4. Forest Products Industry

One of the biggest immediate potentials for diversification in Western Samoa is in timber harvesting, tree farming and saw milling.

Western Samoa has received a proposal from Potlatch Forests Inc. to establish a large-scale commercial timber operation. The proposal includes the establishment of a sustained yield tree farming operation that would yield a minimum of 50 million board feet of logs per year for a milling operation to be established at Asau on the Island of Savai'i. The initial investment for the sawmill and logging facilities is estimated at $2½million (American) with an additional expansion over the next few years estimated at $4million to £6million.

A pilot mill would initially be established which would have a capacity of cutting 15million board feet of lumber per year. Total initial employment for logging and mill operation would be some 150 men.

In addition to exports the milling operati would provide a major portion of lumber nee now imported including banana case shooks. I 1965 cut timber for banana shooks had an impo value of £182,625. After timber is made into shoo it has a much greater value and is used again i New Zealand even though the complete cost an value added is provided by Western Samoa.

Imports of all timber totalled some £300,36 in 1965. If a major part of these lumber impor can be replaced by the local timber and sawmilling operation a material contribution will b made to alleviate, somewhat, the unfavourab balance of trade and deficit balance of paymen picture.

In addition to the sawmilling and sustained yiel tree farming operations, Potlatch would be prepared to -

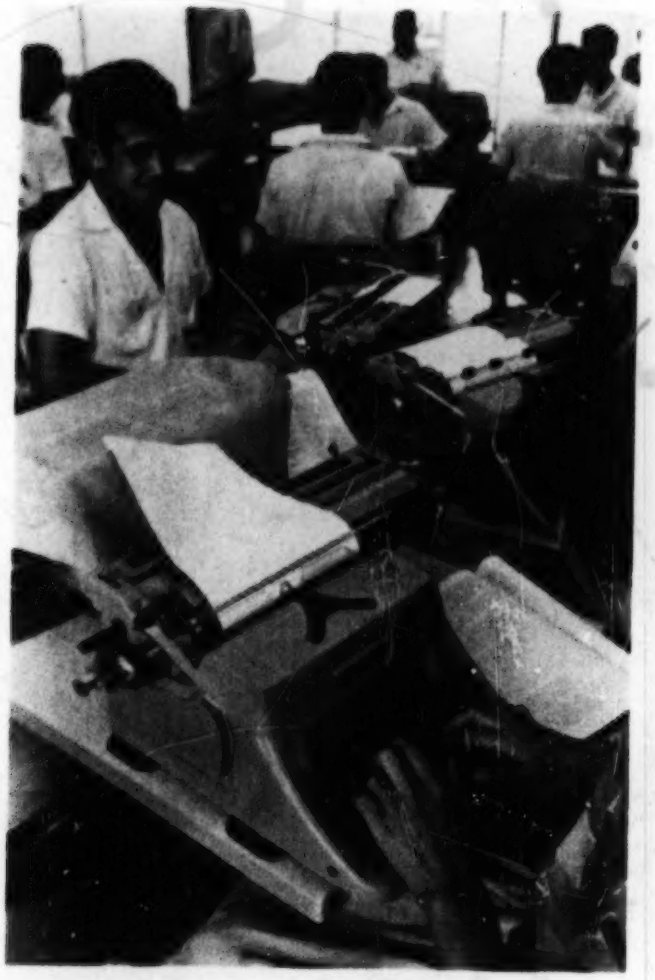
(a) install a power plant at Asau to service th the entire community with the power t be sold to the Public Works Departmen for distribution;
(b) consider the development of a water suppl system at Asau on the same basis;
(c) upgrade the main road as it moves fro one stand of timber to another;
(d) construct secondary roads for acess to timbe stands;
(e) construct spur roads for movement of log on the secondary road and thence t the main road;
(f) enter into a contract to operate wharf an port facilities;
(g) co-operate in assisting government to provide schools, medical facilities and recreational facilities.

Potlatch is also prepared to establish and undertak a timber management plan and assist in developin a forestry service.

As can readily be seen the Potlatch Forest Inc proposal can establish a large industrial base fo Savai'i which could stimulate many other type of ancillary enterprises. It would also open up considerable additional agricultural land and establish a township and population center at Asau.

An ice cream factory under construction

The "Fish tree" in bearing



Samoa College students in business class

Village volleyball competition

On parade! Regime of village school day

In a letter of intent dated 7 March 1966 the Government of Western Samoa gave Potlatch Inc. a nine month option to negotiate the terms of an agreement with the Government of Western Samoa for the development of the nation's timber resources.

As already indicated in another section of this report the major obstacle to the development of forest resources by a large company such as Potlatch is to obtain sufficient leases for a sustained yield of 50 million board feet of logs per year. Existing legislation allows the leasing of customary land for a period of twenty years with a twenty year renewal for agricultural purposes. The land can be tied up for forty years in the initial lease agreement. The Asau Block which is an area of 6,035 acres and where operations are expected to start is government owned and can be leased in multiples of twenty years for a total of sixty years.

Customary land for industrial operations, which would include the sawmill, can be leased for thirty years and a thirty year renewal or a total of sixty years.

The land can be legally leased. The problem is to make the necessary leases to obtain yields of 50 million board feet of logs per year. There would have to be agreements with the matai (chiefs) of many villages. Experience has indicated that this can be a very time consuming process. Customary land boundaries are not normally clearly defined unless a dispute has been brought before the Land and Titles Court which then makes a decision and defines land boundaries.

When customary land is to be alienated there is often a challenge as to the pule (control) over the land to be leased. This normally results in the dispute being brought before the Land and Titles Court. Considerable time can elapse before a decision is made. If a number of such disputes are brought before the Court, which must be resolved before Potlatch obtains enough land for its operations, there could be a seemingly interminable delay in getting this operation started.

It has been suggested that one way to solve this problem is to establish a forest reserve belt above a particular elevation and without encroaching upon any existing agricultural enterprise. The forest reserve area can be used for watershed, erosion protection, recreational use and commercial timber operations. This is what is now being commonly termed the multiple use concept of forest resources. The land would still be in control of the chiefs and they would obtain lease rent and royalties for any land used for timber harvesting or tree farming. The land, however, above the agreed upon elevation could not be used for agriculture or any other purpose except the forestry multiple use concept. Land below the forest belt line would have to be negotiated as separate leases with the matai who have pule (control) over the land. The royalties and lease rent for the land within the forestry belt can be held in escrow until any disputes over land boundaries can be settled.

One of the dangers of this approach would be that secondary roads built by Potlatch to obtain access to timber within the forestry belt would stimulate new crop plantings along the road below the forestry belt. It would then be more difficult to obtain leases for commercial timber development below the forestry belt.

Nevertheless, the forestry belt concept can assure that considerable timber would be available for commercial use while negotiation are underway for leases and court cases are pending for land outside the forestry belt.

5. Visitor Industry Development

In the past two years Western Samoa's attitude toward the visitor industry has changed from a reputation of anti-tourism to full support of this important industry.

The Government of Western Samoa has taken action in support of this industry. Among the steps taken are the following:

1. Under the 1965 Economic Plan contracted with international visitor consultants to study and plan for the development of the visitor industry. The consultants' report titled, "Visitor Destination Area Development Program for Western Samoa" was submitted to government in October 1965.

2. Under the 1965 Economic Plan joined the Pacific Area Travel Association.
3. Passed the Enterprises Incentives Act which allows for an initial five year tax holiday, duty free imports of building materials and equipment, a moratorium on dividends, taxes and other benefits to hotels and visitor support facilities.
4. Amended the Alienation of Customary Lands Act to increase the tenure of leases for hotel development on customary land to 30 years and a 30 year renewal (land can be tied up for 60 years in the initial lease agreement).
5. Amended the Immigration Act to waive the entry permit requirement for visitors who stay in Western Samoa for three days or less.
6. Granted Aggie Grey's Hotel benefits under the Enterprises Incentives Act for a 40 hotel room expansion.
7. The Government has appropriated £40,000 in 1966 for investment in the first major new hotel development and has included an additional £60,000 in its 1967 economic development plan budget for the same project.
8. The Government has engaged a permanent visitor consultant who is providing his services at a token fee.

In seeking to develop its visitor industry as a means of diversification and strengthening its economy, Western Samoa has joined most of the rest of the world in engaging in what is now the biggest item of world trade.

The United Nations Conference on International Travel and Tourism (Rome, August-September 1963) stated in its general resolution that "tourism is a basic and most desirable human activity deserving the praise and encouragement of all peoples and all governments."

The United Nations is declaring 1967 as "International Tourism Year". The United Nations has pointed out that tourism represents 6 percent of world exports of goods and tourist expenditure amounted in 1963 to $53billion. During 1950-1963 the annual growth rate of world spending on goods was 7 percent while the rate of growth of international tourism during the same period was 12 percent. In 1963 world tourist expenditure amounted to some 5% of total private consumer spending.

In the Pacific area in 1964 visitor expenditures totalled $664,822,000. Hawaii has the largest visitor expenditures in the Pacific with expenditures estimated at $253million in 1965. It has become Hawaii's largest industry. It is Hong Kong's second biggest earner with revenues estimated at $150-million in 1965. It is also the second biggest earner for Fiji (estimated 1965, $7,500,000), Tahiti (estimated 1965, $4,200,000) and New Caledonia (estimated 1965, $1,200,000). It is estimated that the South Pacific Islands (excluding Western Samoa, Tonga and the Cook Iislands) earned some $14.7 million from visitor expenditures in 1965. Visitor expenditures in Western Samoa in 1965 are estimated at between $200,000 and $250,000.

Harris, Kerr, Forster and Company has projected the number of visitors to Western Samoa at 24,000 by 1970 and some 46,000 by 1975. At an average stay of 3 days and an average expenditure of between $25-$30 per day visitor expenditures are estimated at some $1.9 million (£700,000) by 1970. This would make the visitor industry a rival in total earnings to bananas (estimated £700,000) and cocoa (estimated £775,000) by 1970.

By 1975 projected visitor expenditures, at the same average daily expenditure and length of stay, would total some $3,712,000 (about £1,320,00). *With government's continued effort to develop the visitor industry it is projected that between* 1970 *and* 1975 *the visitor industry will become Western Samoa's biggest single income earner.*

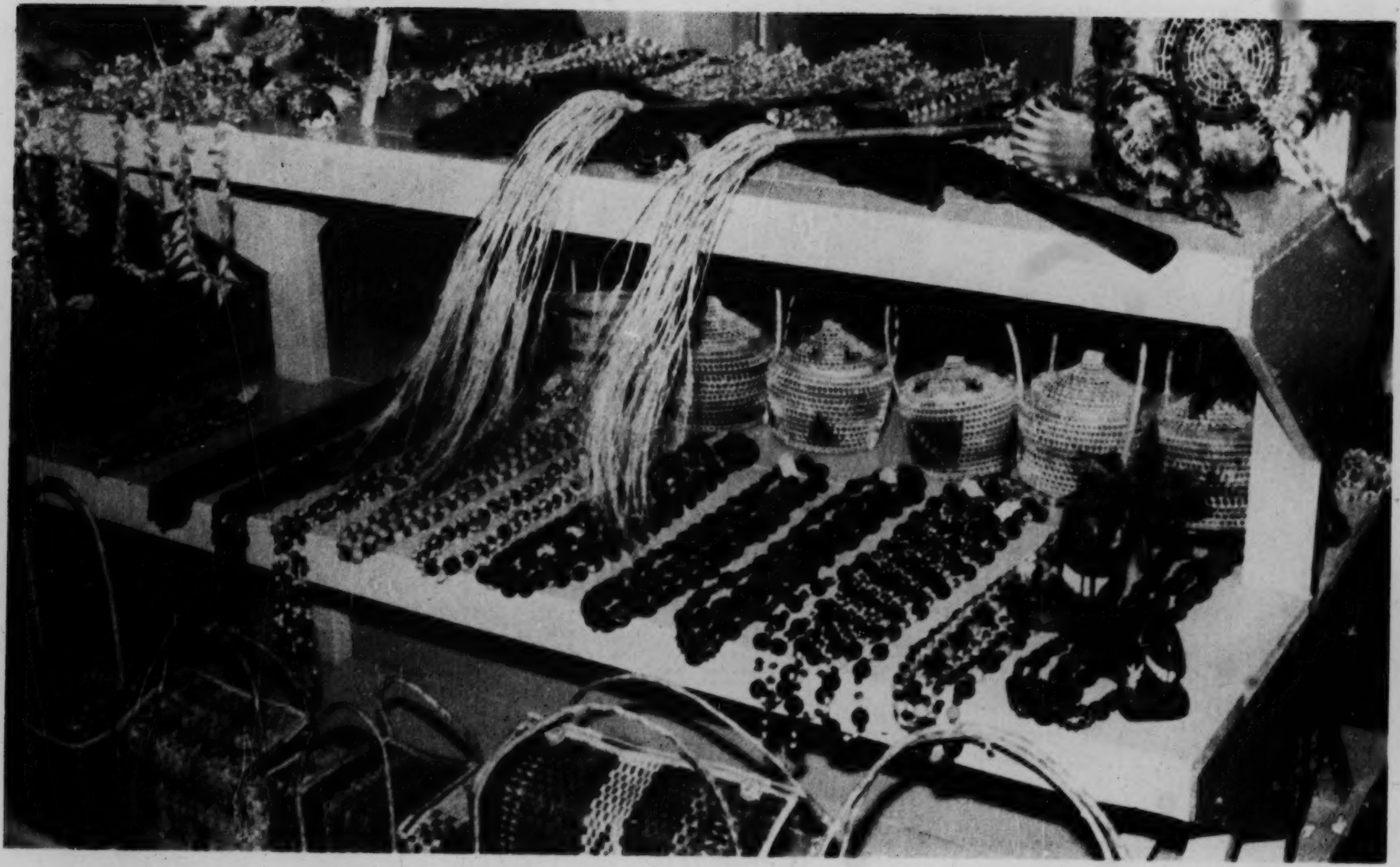
This will provide strong diversification and income sinews to Western Samoa's economy.

6. Improved Agriculture Efficiency

One of the old German pioneers who initiated his own planting activities in Western Samoa in 1900 (and who is still active) has said: "The Samoan village planter is not a farmer, he is a

Part of Aggie Grey's Hotel

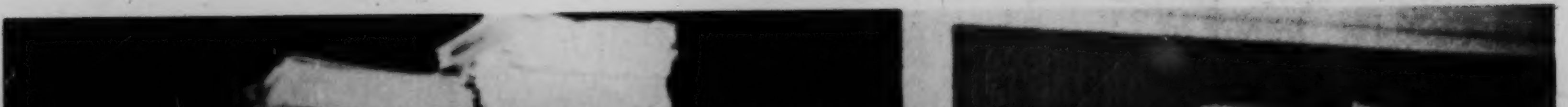
Expansion of Aggie Grey's Hotel



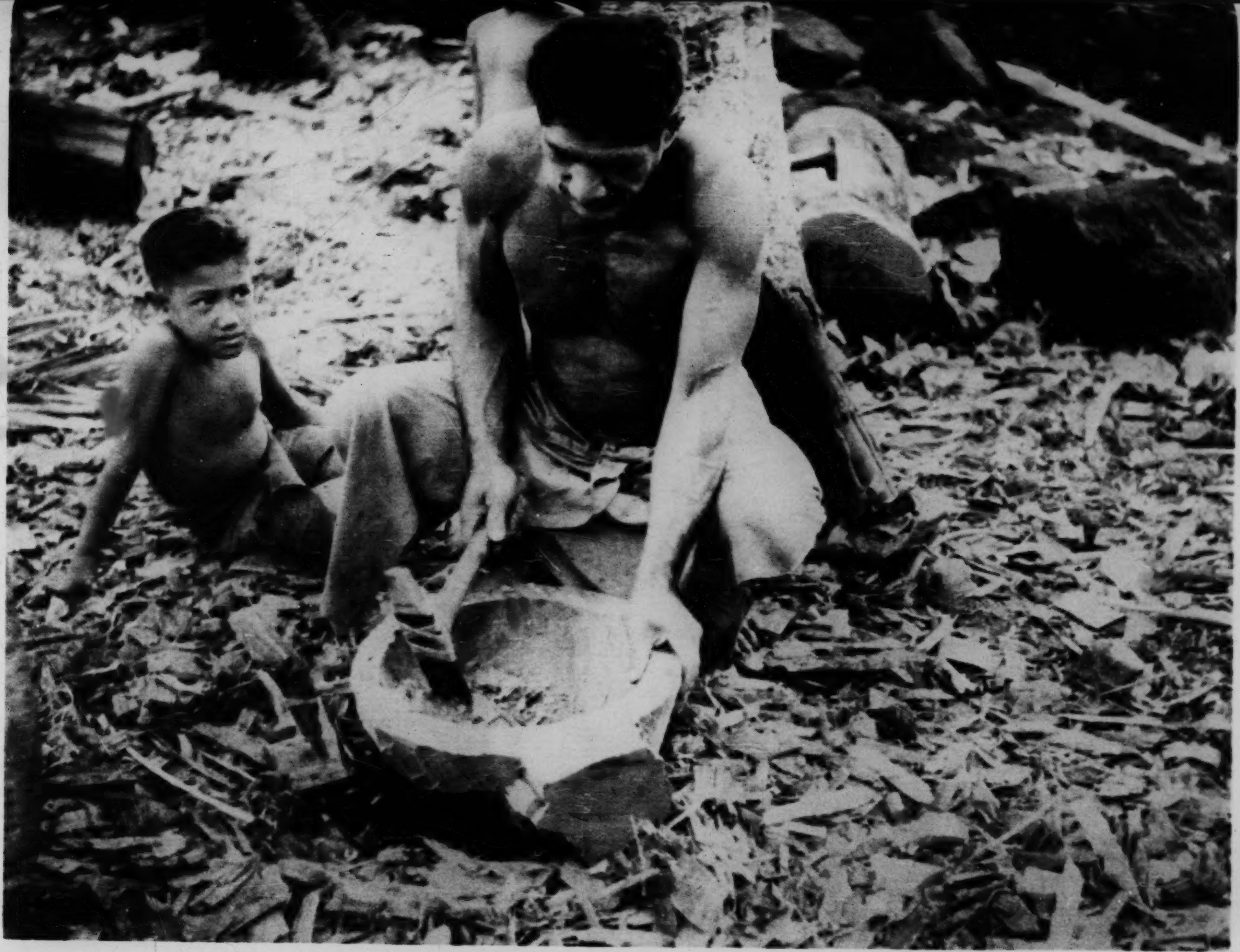
A handicrafts corporation display

Samples of local handicrafts

1st year students South Pacific Regional Tropical College of Agriculture



Regional Tropical Agricultural College Library



The "Umeke" (bowl) finds a multiple use in the home nter. He plants and then he forgets his crop til it begins to bear and then he harvests". This s said by way of making a point that there is le scientific farming on the village level. This of course, not untypical of most less develop- areas. The fact remains, however, that since st of the nation's agriculture production and ports come from village agriculture, the productivity per acre must be improved in village riculture in order to increase production, exrts and income.

rtilizer Use

In 1965 only £684 of fertilizer was imported o Western Samoa for use on a total estimated 0,500 acres in main crops and an additional ,000 acres in grass land. The use of fertilizer ust be made a general practice throughout estern Samoa in order to increase productivity r acre. Agricutural economic plan projects inude considerable application of fertilizer. Loans ade by the Development Loan Committee have o required the application of fertilizer. The me consideration should hold true in Hurricane elief lending.

Typical village agricultural practice is to shift new land when soils are exhausted. With conderable increases in population and less fertile op-land on higher elevations, this practice can longer be continued.

One of the problems in the use of fertilizer is at the village planter is accustomed to receive as a bonus from the Department of Agriculture pending on the number of cases of bananas ipped. Fertilizer has been given to the planter a sporadic basis. He has not been taught the lue of utilizing fertilizer to increase his production. Few , if any village planters have purchas- fertilizer on their own account.

The Department of Agriculture realizes the eed for education in the value of using fertilizer well as in field educational programmes in her agricultural practices. Priority has been ven to increasing and improving field extension ork. This, however, is a long term process and depends to a great extent on improving the quality and number of qualified agricultural field officers.

Alafua Agricultural College

Much hope has been placed in the new Alafua Agricultural College to produce well trained field officers. This college has been established on very high standards, not only in teaching but also in faculty research. There is little question that the most valuable and productive research will come from the agricultural college since the experiment station activities of the Department of Agriculture are limited and without technically trained researchers.

There have been no agricutural economic studies made of investment, cost of production and revenue, under various conditions, in village agriculture or in other than village agriculture. Some limited work has been done in preparation of plan projects but these lack the thorough analysis needed. There is an impending need for economic studies of the basic crops as well as potential crops. The expanding livestock industry should also be studied. Alafua Agricultural College is endeavouring to add an Agricultural Economist to its staff. This effort should be supported. The nation should also actively support the effort by Alafua College to be chosen as the University of the South Pacific. If such a university is located in Western Samoa, it will not only assist in the agricultural sphere but would present an excellent opportunity for Western Samoans to obtain university training. There is little question that Alafua College will make a material contribution to improving agricultural e[illegible]ency in Western Samoa.

Land Tenure Security

As already indicated, the Alienation of Customary Lands Act, 1965 allows the leasing of customary land by matai (chiefs) and foreigners, but not the taule'ale'a (untitled). In most cases matai by virtue of their title have sufficient agricultural land available to them. They control this land during their life-time (unless deposed which is rare) without paying any lease rent. There is not the motivation for leasing land for agricultural purposes by the matai since they are adequately provided. In fact, nine months after the Customary Lands Act was passed, not a single lease of customary land had been made for agricultural purposes. It would appear that from the development point of view the contribution of the Alienation of Customary Lands Act will be primarily in the leasing of customary land to non-Samoan citizens for agricultural (as well as other) development.

There was an effort to amend the Customary Lands Act, when it was debated in the Legislative, to allow taule'ale'a to lease customary land. This was defeated by a narrow margin.

Any change in the social system of the country, upon which the control of land is an important element, is a matter for the Samoan people to decide and is not within the province of this report. From the point of view of agricultural efficiency, however, it is clear that those who work land upon which there is insecure tenure will certainly not have the productivity of those who farm land for which there is secure tenure.

It has been suggested that a system of land registration might be developed whereby each user of land has his land registered, with the approval of his matai, and that some security of tenure also be allowed - as approved by the matai. It has been pointed out that the great majority of coconut trees in existence were planted during the German time. In those days the Germans actually required each male between certain ages to plant a certain number of trees per year. There is little question that the lack of motivation in planting new coconut groves is due, at least in part, to the long period needed for bearing as related to insecure tenure of land. One of the economic plan projects seeks to overcome this lack of propensity to plant coconut trees through a system of subsidies. The basic problem of land tenure as related to agricultural efficiency, however, still remains.

Larger Agricultural Units

Another impediment to agricultural efficiency is the limited size of the agricultural unit. Before the January 1966 hurricane there were 5,000 to 6,000 small planters who had a banana shipm allocation from the Department of Agricult The majority of these growers shipped onl few cases of bananas. Fruit Distributors Limi the company which has the monopoly for imp ing bananas into New Zealand, has consta demanded an improvement in the quality of b nas shipped. There is also the problem of di control which is almost impossible with so m growers on small parcels of land. Further, counting disease there is little question that la units have opportunities for increased efficiency available to small growers. Western Samoa's h trade imbalance and its limited reserves m it mandatory to increase exports, i.e. export come. Encouragement should be given to la producers not only in banana production but w all crops.

This has, in fact, been initiated to a certain tent. One of the projects in the economic devel ment programme is the Lata land developm scheme. This project envisages the developm of some 12,000 acres of government owned l by private developers and after a long period development can be sub-leased to Samoa farm under an organized development scheme.

The Department of Agriculture itself is seek to lease customary land for a large sized ban plantation of several hundred acres as a p hurricane production effort. The Department also encouraging large producers and hopes t its own efforts, if successful, will encourage grow to initiate large banana production units.

It is clear that in order to maintain and incre its production Western Samoa must not only i prove its village agricultural production but m also balance this effort with larger sized agric tural units.

7. Attraction of outside Capital and kno how

As was pointed out in the 1965 Economic P as well as in this report, Western Samoa's n for capital and know-how is considerable and m be imported from overseas. The 1965 econo plan recommended the passage of legislation wh

ould grant incentives to both local and overseas
vestors. This legislation was passed in 1965 and
nce then one-half dozen enterprises have been
anted benefits with several others pending. As
limited free enterprise economy (mixed econo-
y), Government does not have the control over
vestment in the private sector. It can, however,
ncourage overseas capital as well as, to the ex-
nt of its availability, local capital. It has, indeed,
one this through the Enterprises Incentives Board.
can also encourage the direction of such invest-
ent through the incentives it is willing to grant.
hus in the case of the visitor industry, govern-
ent is attempting to encourage investment in a
ajor hotel project by offering to provide a por-
on of the equity capital. It is doing this not only
assist in the equity financing but also to assure
e private investor that government fully supports
e establishment of major hotel and visitor sup-
ort facilities.

As Western Samoa is little known, or not known
all, it must point out the opportunities for over-
as private capital investment more aggressively
han it has in the past. The establishment of a
rade and Development Commissioner in New
ealand will assist in encouraging private capital
vestment from that country. The Department
Economic Development is attempting to attract
vestors by mail. An item should be included in
the budget of the Department of Economic Development which will allow private capital investment prospecting trips to inform potential investors of the opportunities for investment in Western Samoa. Experience has indicated that those countries which are willing to invest in such a development effort have found that such efforts have paid off handsomely in the long term. This is particularly true of those countries which are relatively unknown.

Investment capital can also be borrowed by government for public facilities projects. Government's first loan was some £1,250,000 for harbour development. Recently a £75,000 loan was made for plantation restoration as a result of the 1966 hurricane. Grants have also been received but these are not common forms of bilateral or multilateral aid. Although grants have been received from New Zealand, Australia, the United States and the United Nations (in food from the World Food Program) all of these grants have been for emergency purposes and not for development investment. All of the overseas loans made thus far have been from New Zealand.

The problem with public capital borrowing is the limited capacity of the nation to service debt. This problem is discussed in greater detail in other sections of this report.

Section VI

Agricultural Expansion, Limitations and Land Utilization

It is often said in Western Samoa that the nations's future lies in the soil. It is true that agriculture has formed the basis for the economy and will continue to play a most important role. Agriculture has largely been of a subsistence type in Western Samoa with little in money income accruing to the average Samoan planter. The land and sea have provided food and the means for shelter with a very small money income (estimated per capita income in 1965 - £27.12.2 but most of the money income is centered in Apia).

Agricultural Practice

There has been little intensive agriculture in Western Samoa. The practice has been to abandon lands after soil depletion and clear bushland at higher elevations from the sea. The land previously cultivated is abandoned to undergrowth and forest until soil fertility is renewed. This has been Samoan agricultural practice as long as anyone can remember. Many in Samoa assume that this practice can be continued indefinitely. Unfortunately, this is not so, and the limitations to this type of agricultural development include the following factors:

1. A rapidly increasing population

A population that is increasing at almost 3.5% a year needs not only land to live on but additional acreage for subsistence farming. It is estimated that there were some 94,500 acres in crops in 1965. This is roughly .7 acres per person. On the basis of this ratio some 133,000 acres would be needed in 1976, 157,500 in 1981 and 187,600 by 1985. With this type of demand, the type of shifting agriculture now practiced can no longer be effectively utilized.

2. There is a limit to the amount of crop farmi

It is estimated that some 106,500 additional acr can suitably be used for crop farming. On th basis and with a ratio of .7 acre per person th effective maximum limit will be reached in 2 years. This poses a very serious problem f the nation and means that, (a) the method agriculture must be improved including more i tensified agricultural practices, (b) a more d versified economic base must be developed wi additional sources of income and employment support the growing population.

3. Land at higher elevations is of poor fertili and cannot effectively be used for crop farmi

On land which usually begins at the 800 fe to 1,000 feet contour above sea-level, farmers fi that soils deteriorate in fertility very rapidly. Cr yields are satisfactory for only about one ye before the land has to be abandoned to bush an forest. The recuperation period needed before th land can be used again is usually in excess of years. The soils survey conducted in 1956-19 (*Soils and Land Use of Western Samoa* - Ne Zealand Department of Scientific and Industri Research) clearly points out that most soils abo 1,200 feet cannot be relied upon for expansion any of the existing major economic crops nor f any great increase in production of subsisten crops.

The report further concludes that in order achive "a stable agricultural economy it will necessary to develop fully the stable soils of th lowlands and lower foothill regions". Furth

"Nu'utele" near Falealilii

Bonito fishing canoes on shore

Nurseries being established for small crops development

Farm mechanization is rare

little hope is given for the utilization of upland soils for any extensive grazing. There is a question as to whether grasses can be grown, containing sufficient protein, on the acid, base-deficient soils of the upland areas, to nourish livestock efficiently.

4. The need to keep land in forest to protect the water supply, prevent erosion and flooding and to provide an area for sustained-yield timber production.

A number of observers have already pointed out the reduction in the supply of surface water in some areas which they attribute to the clearing of forest areas for grazing and crop production. In addition to watershed needs and the damage caused by erosion, the nation has the opportunity to develop a sustained-yield timber industry with the resultant timber mills that would provide income and employment. This again, limits the land available for shifting agricultural practices.

5. The demand for greater money income which results in the demand for more land to be farmed by each individual.

Little in money income is obtained by the average Samoan planter. With the increasing demand for money income by the average Samoan planter, there is a commensurate increase in demand for more land to farm.

6. The growing needs of a nation which is emerging from a subsistence to a more sophisticated enonomy.

Western Samoa now has substantial overseas loans; it has growing demands for roads, power, water, telephone and other communications, schools, health facilities, etc. It can no longer live on the hand-to-mouth basis of a subsistence economy. It needs to generate income not only to meet its obligations but to provide for and improve the living standard of its people. The shifting type of agriculture as now practiced is an inefficient method of obtaining the wealth from the land.

Area Available for Agriculture

There are some 707,750 acres of land in Western Samoa. At least half of this area, according to A.-C. S. Wright,* needs to be kept in forest to protect the water supply of the nation, prevent flooding and allow for commercial timber production. Included are young lava beds which have not as yet decomposed enough to allow it to be used for agriculture. This leaves some 350,000 acres which can be used for farming.

The soil survey conducted in 1956 showed that some 54,600 acres of varying soil fertility were suited for banana production; 146,100 acres suited for cocoa production; 70,050 acres suited for coconut production; 6,000 acres for special minor crops; and 81,000 acres suited for permanent pastoral (mainly cattle) production. This gives a total of some 357,750 acres for agricultural use.

It has been estimated that there were some 88,000 bearing acres in main crops in 1965 and 20,000 acres in grassland. On the top of page 41 is an estimate of the overall agricultural land use situation:

A. C. S. Wright suggests that only 165,500 acres are efficiently suitable for the three main crops. If forest lands were utilized including soil of less suitability then some 270,750 acres can be utilized for the three main crops. Accessibility, availability of water, problems of soil erosion and elevation would be limiting factors to the development of this amount of land.

The soils survey conducted in 1956 estimated the following single crop equivalent for the three major crops.

Coconuts	Cocoa	Bananas	Total
55,080	17,850	16,970	89,900

Approaches to Agricultural Land Use - Three Major Crops

Table XIII estimates export production and export value with varying approaches to land utilization of the three main crops. Approach I shows the optimum extensive land use for three main crops. A total of 270,750 acres would be used. The distribution of acreage among the three main

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***Soils and Land Use of Western Smoa.**

TABLE XIII

PROJECTIONS OF EXPORT PRODUCTION AND VALUE FOR MAIN CROPS WITH VARYING APPROACHES TO LAND UTILIZATION

	I. 270,750 ACRES			II 165,500 ACRES			III. 165,500 ACRES			IV. 165,500 ACRES		
	Acres	Production	Value...	Acres	Production	Value...	Acres	Production	Value...	Acres	Production	Value...
COCONUTS	70,050	24,517 (tons)	£1,593,600	70,050	24,517 (tons)	£1,593,600	106,450	31,935 (tons)	£2,075,700	70,050	24,517 (tons)	£1,593,600
COCOA	146,100	43,830 (tons)	£7,231,900	40,850	12,255 (tons)	£2,022,000	40,850	12,255 (tons)	£2,022,000	77,250	23,175 (tons)	£3,823,800
BANANAS	54,600	3,822,000 (cases)	£5,468,600	54,600	3,822,000 (cases)	£5,468,600	18,200	1,274,000 (cases)	£1,656,200	18,200	1,274,000 (cases)	£1,656,200
	270,750 acres		£14,294,100	165,500 acres		£9,084,200	165,500 acres		£5,753,900	165,500 acres		£7,073,600

NOTE: For Approaches I, II and IV, an average of 700 weight per acre has been used for coconut export production. Export production per acre has been reduced to 600 weight per acre for coconuts in Approach III because productivity is reduced at higher elevations. An export production of 600 weight per acre is assumed for cocoa in all approaches and an average of 70 export cases per acre for bananas. Returns for the three crops are estimated at an average of £65 per ton for copra, £165 per ton for cocoa and £1.6.0 per case for bananas.

tal Land Area of Western Samoa		707,750 acres
inimum Area to be kept in forest and other uses		350,000 "
Area Available for Agriculture:		357,750 "
nd in 3 main crops	88,000 acres	
assland	20,000 "	
nall crops	6,000 "	114,000 "
Remaining land available for agriculture:		243,750 "
Remaining area suitable only for grazing:		137,250 "
Remaining area suitable for crops		106,500 "

ops is according to suitability as suggested by C. S. Wright. With approach I some 70,000 res would be planted in coconuts, 146,100 acres cocoa and 54,600 acres in bananas. Some 24,0 tons of copra would be produced at full bearg, with a value of about £1,593,600. Cocoa proction is estimated at 43,800 tons with a value, £165 per ton, of £7,231,900. At an average port of 70 cases of bananas per acre, 54,600 acres ould produce some 3,822,000 cases having a vae of some £5,468,600 at current returns per case. he total estimated returns under Approach I ould be some £14,294,100.

Approach II shows a more realistic acreage lotted to the three major crops. Some 165,000 res or 47.1% of the total acreage of 350,000 res available for agricultural use are apportioned the three major crops as follows: Coconuts 0,050 acres; Cocoa 40,850 acre and Bananas ,600 acres. This compares with Approach I which allocates 77.1% of available land for agriculture to the three major crops. In Approach II the same acreage as in I is allotted for coconuts and bananas but land for cocoa is reduced by over 100,000 acres. Estimated cocoa production is reduced to 12,225 tons and the value of this crop to a little over £2 million. Total estimated value for all three crops is £9,084,200.

In Approach III emphasis in land utilization is given to coconuts with cocoa acreage remaining the same as in II and banana acreage reduced to 18,200 acres. The total estimated export value in III is some £5,753,900.

There is a question as to whether as much as 106,450 acres can be planted in coconuts as indicated in Approach III. Coconut trees cannot grow effectively above the 700 feet elevation. Following in Table XIV is the area of land in Western Samoa at various elevations up to the 1,200 feet level.

TABLE XIV

LAND AREA IN WESTERN SAMOA AT VARIOUS ELEVATIONS UP TO 1,200 FEET

Elevation	Land Area UPOLU (acres)	Land Area SAVAI'I (acres)	Total (acres)
0— 700 feet	138,330	202,700	341,030
700—1,000 feet	55,470	29,730	85,200
1,000—1,200 feet	52,340	20,610	72,950
	246,140	253,040	499,180

It will be noted that the total land area below the 700 feet level is 341,030 acres. Coconuts must compete with considerable other uses for land below the 700 feet contour level. Almost all of the population of Western Samoa resides below this elevation. With the population increasing at a rapid rate more and more land will be needed below the 700 feet level. Further, coconuts must compete with a whole range of public and private uses of land as wel as cocoa, bananas and other crops. Finally, not all of the land below the 700 feet is is suitable for farming because of soil conditions such as recent lava flows, etc.

It is therefore vary unrealistic to assume that coconut trees can expect to use almost one-third of the total land area available below the 700 feet contour level. Some 499,180 acres are below the 1,200 feet elevation while 208,570 are above this level and have limited economic use.

Approach IV in Table XIII retains 70,050 acres in coconuts (with an export value of £1,593,600) as in I and II; bananas with 18,200 acres and an export value of £1,656,200 as in III; and cocoa acreage at 77,250 acres with an estimated production of 23,175 tons and a value of £3,823,800. Total estimated export value in Approach IV is estimated at £7,073,600.

The question then arises as to which of the approaches to land use should the country strive toward in planning the production and export of its three major crops. The nation should, of course, attemp to maximize its export income but this has certain limitations as shall be indicated.

Approach I for all practical approaches is out of the question since only 165,500 acres is suitable for the main crops. Any effort to grow these crops on aditional acreage would result in poor productivity and would prevent the use of this land for more productive agricultural oriented operations.

Of the remaining approaches to utilization of land for the three main crops, Approach II offers the greatest possible returns with an estimated export value of some £9,084,200 at average export prices

The emphasis in Approach II is on ban production with some 54,600 acres allocated this use. There are a number of limiting fac in a more than three-fold expansion of ban acreage. These include: 1. Markets; 2. Soil D pletion; and 3. Disease.

In respect to markets, Western Samoa has o one current export market and that is New Ze land. This market can take a maximum of abo 1 million cases of bananas from its traditional su pliers - Western Samoa, Fiji, Tonga and the Co Islands. The volume of exports envisioned in A proach II is 3,822,000 cases. Although the Ne Zealand market will grow with the growth of population it will probably take several decad at the least before that market will grow 3.8 tim its current size. It would mean major mark would have to be developed elsewhere. This wou be difficult with the large number of small un that characterizes present production.

Bananas give an excellent return per acre b it is a crop which considerably depletes the s and the usual practice in Western Samoa is replace bananas with another crop - usually coco after three to five years. The soil can, of cour be replenished with the use of fertilizer but th would hardly be possible with a large numb of small producers on some 50,000 acres of lan

Disease is also a strong limiting factor in suc an extensive utilization of land in bananas. Th control of bunchy-top disease has been found be extremely difficult. The number of people would take to police such a vast acreage in ord to control bunchy-top and the resulting admini trative cost would be prohibitive. The sig ficant areas which have not been infested by bu chy-top are the North Eastern end of the Isla of Upolu and the North Western end of the Isla of Savai‘i. This again presents a limitation to co siderable expansion of this crop. The current pro lem is to kill out most of the existing trees, repla with disease free material and police the dise free areas. The effort is to attempt to recover previous production levels. Any effort at large sca expansion of acreage is out of the question.

Although bananas initially produce a better return per acre the life of the banana tree is limited compared to the tree crops of coconuts and cocoa. Considering the long term productivity of coconuts and cocoa versus bananas; the rapid soil depletion by bananas; the need and difficulty of establishing major new markets with a village production basis; and the difficulty of controlling the insidious bunchy-top disease, it would not be realistic to try to place 54,600 acres in bananas. Such an unlikely effort should not be established as a goal. As indicated, it will take a considerable effort to rehabilitate the badly damaged banana industry.

Approach III shows an estimated return from the three major crops of some £5,753,900. This approach emphasizes coconut production. As already indicated, there would not to be enough land available below 700 feet elevation for the some 106,000 acres in coconuts contemplated in this approach.

Approach IV sets as goals the planting of some 70,000 acres in coconuts. A slightly higher acreage in cocoa with 77,000 acres, and 18,200 acres in bananas. Total returns are estimated at some £7-million.

Table XV compares the projected use of land in three main crops with 1956 and 1965 equivalent bearing acres.

TABLE XV

COMPARISON OF LAND USE: THREE MAJOR CROPS: 1956, 1965, AND GOALS

Crop	1956 (acres)	1965 (acres)	Goals (acres)	Increase over 1965 (acres)
COCONUTS	55,080	52,000	70,050	18,050
BANANAS	16,970	16,000	18,200	2,200
COCOA	17,850	20,000	77,250	57,250
	89,900	88,000	165,500	77,500

NOTE: Estimate for 1956 is by A.C.S. Wright, Estimate for 1965 is based on 500 weight per acre and 13,000 tons production for export on copra; for bananas at 30 cases export per acre and 481,500 cases for export; and cocoa at 400 weight per acre and 4,000 tons export. Actual exports for copra and cocoa were less but there were carry-over stocks.

The greatest increase is in cocoa acreage with 57,000 additional acres set as a goal. There is also a substantial increase in coconut plantings - some 18,000 acres. The emphasis on cocoa over coconuts is primarily because coconuts have a more limited potential area for production. As already stated, A. C. S. Wright points out in his soils survey that only 70,000 acres are suitable for coconuts; 146,100 acres for cocoa and 54,600 acres for bananas.

There is, of course, no problem in selling cocoa or copra on the world market at going market prices. Western Samoa's blend cocoa has commanded a premium of 20% to 40% over the world price because of its high blend quality. In recent years, the cocoa price has gone down and this has caused pessimism as to the future of cocoa as a commercial crop. Thus from an average f. o. b. price (all grades) of £222 per ton in 1962, the price decreased to an average of £193 per ton in 1963, £161 per ton in 1964 and £152 per ton in 1965. The highest per ton return per shipment in 1965 was £177 while the lowest was £124. Prices have recovered considerably in 1966 and for the first six month of the year the low was £172 per ton and increased steadily to £228 per ton for the last shipment made.

Copra prices in recent years reached an f. o. b. low of £50 per ton in 1961 and 1962 and a high of £72 per ton in 1965. During the first six months in 1966, the price of copra dropped somewhat to a low of £63.25 per ton in May. The average for the first half year was £67.5 per ton.

In terms of returns per acre between copra and cocoa, a comparison between the high and low prices (f. o. b.) during the last five years is revealing. In 1962 with the average return to cocoa (all grades) of £222 per ton the (f. o. b.) return would be some £44.5 per acre (at 400 weight per acre). This compares with copra (all grades) with a high of £72.0 (f. o. b.) per ton in 1965 and an average return per acre of £18 (at 500 weight per acre). The low year for cocoa of £152 per ton (f. o. b.) in 1965 would return £30.4 per acre. The low year for copra of £50 (f. o. b.) per ton would yield £12.5 per acre.

Both cocoa and copra yield considerably more than 400 weight and 500 weight per acre respectively. It has been estimated that with the Lafi 7 cocoa variety as much as 1 ton per acre can be produced and with young full bearing coconut trees a productivity of 800 weight per acre can be reached.

It is clear that returns per acre for cocoa are superior to that of copra. Coconuts have a greater multiple use than cocoa and in Western Samoa the coconut is a part of the village diet. The copra market has also been less volatile than the cocoa market. As a commercial crop and as a means of earning overseas income cocoa offers a considerable potential. It is justifiable therefore to establish as a goal the expansion of 57,000 additional acres in cocoa. The planting of this additional acreage in cocoa goes considerably beyond 1970.

The 1966-1970 Plan programme places greater emphasis on coconut and banana production than on cocoa. One of the reasons for this was the low price for cocoa in 1964 and 1965. Another is the length of time it takes to produce cuttings of the superior cocoa varieties. Additional emphasis should be given to the propagation of Lafi 7 cuttings during the five year plan period in the projects of annual plans. Not only should there be an expansion of central cocoa propagation facilities such as that included in the five year plan programme but full investigation should be given to the establishment of field propagation units. Although centralized control may be more difficult with field units, it will facilitate the objective of spreading the new plantings of superior varieties of cocoa throughout the country and will serve to interest and educate village planters who would otherwise not have such opportunity.

The cocoa crop is well suited to the traditional approach to Samoan agriculture. It is also well suited to the customary land system and as a tree crop, is ideal for the rocky volcanic land of the country. Western Samoa's rocky soils are not suited to the use of mechanical methods of farming and the emphasis must necessarily be on tree crops.

Plan Outline Agricultural Land Use

Table XVI outlines a plan for the use of land available for agriculture. An estimate is also made of potential ultimate export return from such land use. The returns are based on the full maturity of each of the agricultural uses and indicate the potential value of exports (based on current average prices) from such use. Actual production value would be greater since only export returns are estimated. With the full utilization of the land available for agriculture some £8.5 million in exports can be expected.

The three major crops would take up the greatest part of the available agricultural land at 165,500 acres and potential export returns equal some £7million.

It is estimated that there are some 20,000 acres presently in grassland. All of the beef produced on this land is sold locally. According to A. C. S. Wright an additional 137,250 acres are suitable grassland. By utilizing a portion of this land for livestock, it is estimated that £500,000 in exports can be developed. This land can be more fully used for grazing but considering access, the system of land ownership and elevation only a portion of its capability has been assumed as being utilized.

TABLE XVI

A PLAN FOR THE USE OF AGRICULTURAL LAND IN WESTERN SAMOA AND POTENTIAL EXPORT RETURNS a)

			Acres	Est. of Export Returns
Area Available for Agriculture:			357,750	
Area in 3 main crops:	Present	88,000		
	Additional	77,500	165,500	7,000,000
Area ii grassland:	Present	20,000		
	Additional	137,250	157,250	500,000
Area in Other crops:	Present	6,500		
	Additional	6,000	12,500	350,000
Area in Macadamia Nuts			4,000	670,000
Unused land			18,500	—
			357,750	£8,520,000

a) The estimated returns are based on the full productivity of the various agricultural uses.

NOTE: The estimates for the 3 main crops are as in Table XV; Estimated return for grasslands assumes that: one-fourth of the additional acreage is not useable; that the only half of the remaining land is used for cattle grazing; the average carrying capacity of the land is one beast per 2 acres; some 51,600 head are carried for export at an annual slaughter of 25% of the herd; the average beast weighs some 450lbs with a return of £40 per beast. Estimated return on other crops assumes: a £250,000 export on the additional 6,000 acres versus a 1965 return of some 100,000; most of the small crops production is expected consumed or used in food processing. Estimated return for macadamia nuts is based on 48 trees to the acre, 70 lbs of nuts per tree and a return of 1/- per lb.

It is estimated that there are between 6,000 to 6,500 acres of land presently in small crops. This is primarily in taro and ta'amu. Most of the product of this land is consumed by the grower and his aiga. More taro is being grown for export and with the anticipcated demand for small crops to be utilized in food processing, an additional 6,000 acres is established as a goal. The export from the additional acreage is expected to be somewhat greater than present acreage.

The Lata Land Development project recommends the planting of some 4,000 acres in macadamia nuts. Macadamia nut trees have shown excellent growth capability in Western Samoa. The Western Samoa Trust Estates Corporation has taken a strong interest in this crop and has planted both superior cuttings as well as seedlings. The Department of Agriculture has also imported cuttings and seedlings. There is an excellent market potential for this tree crop both as raw and processed nut. A definitive agricultural plan is needed for the development of this crop.

It is assumed that about 5% of the total land suitable for agriculture will not be used because of access, land needed for roads, housing, etc.

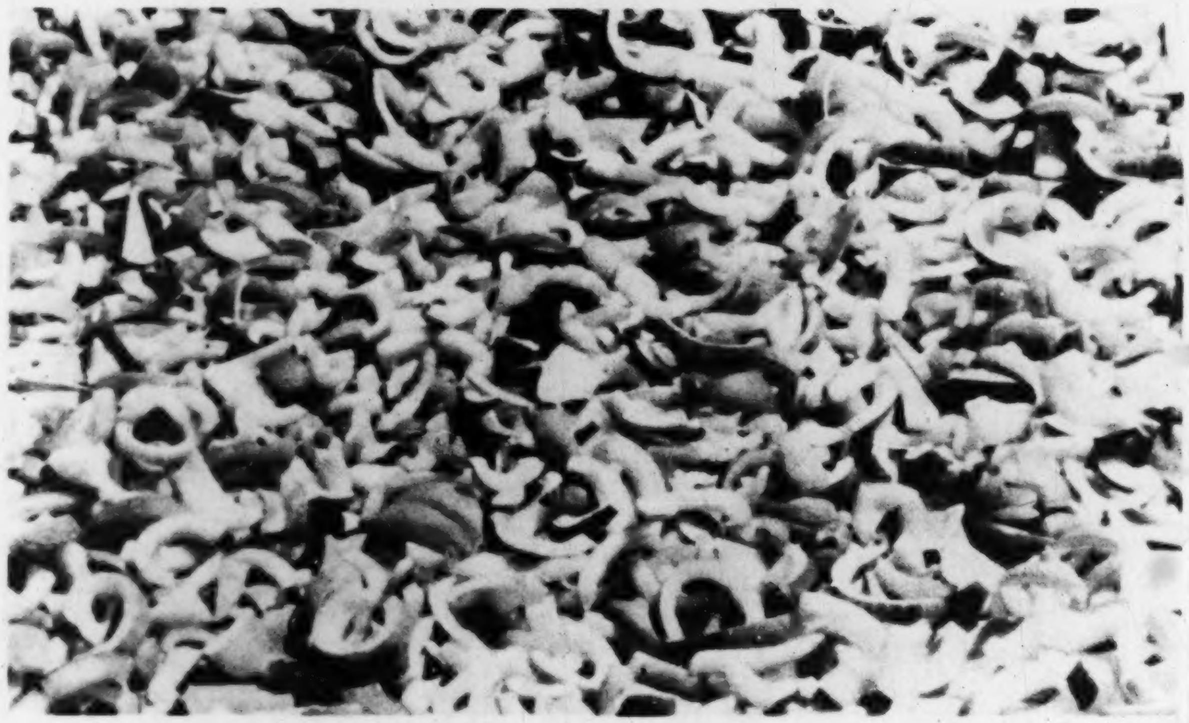
This plan approach for the utilization of agricultural lands can be used as a guide in initiating projects through the Economic Developme Board.

The plan outline can be varied as more inform tion is developed on soils, technical advanc markets as well as changes in local environment aspects and the ideas of entrepreneurs interest in large-scale agricultural operations. In the me time the nation can strive to attain the goals f development of its agricultural lands.

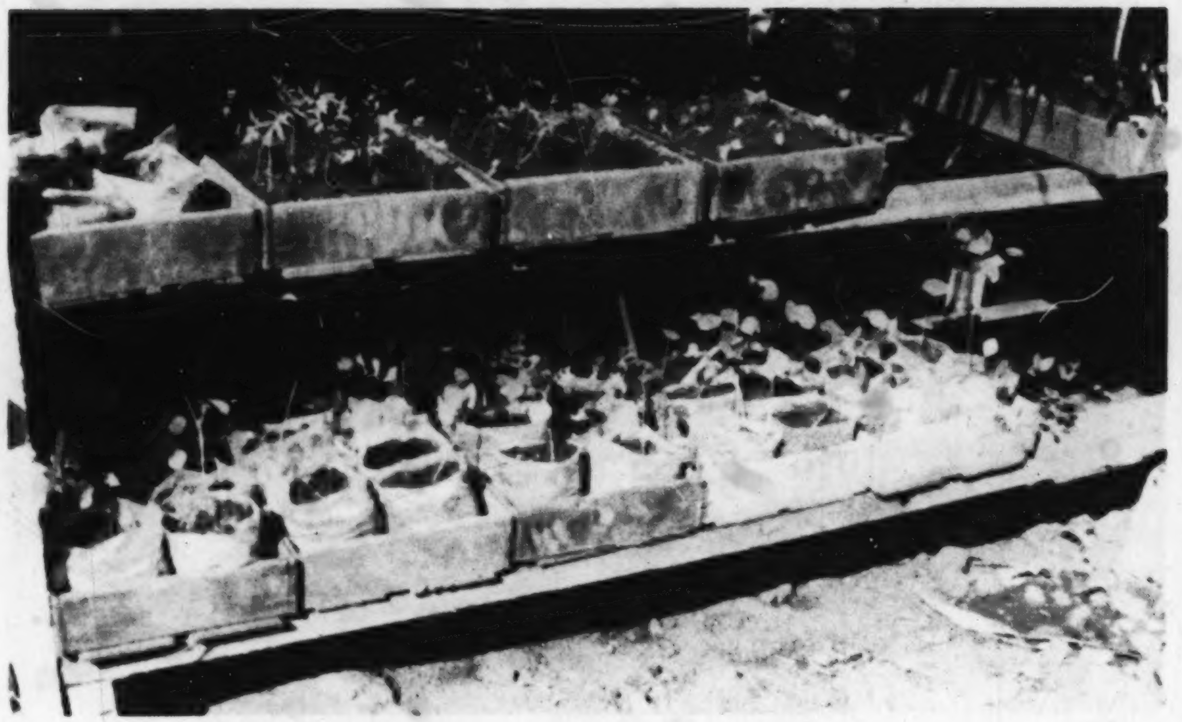
A young taro patch

Section of a Coconut Nursery

7



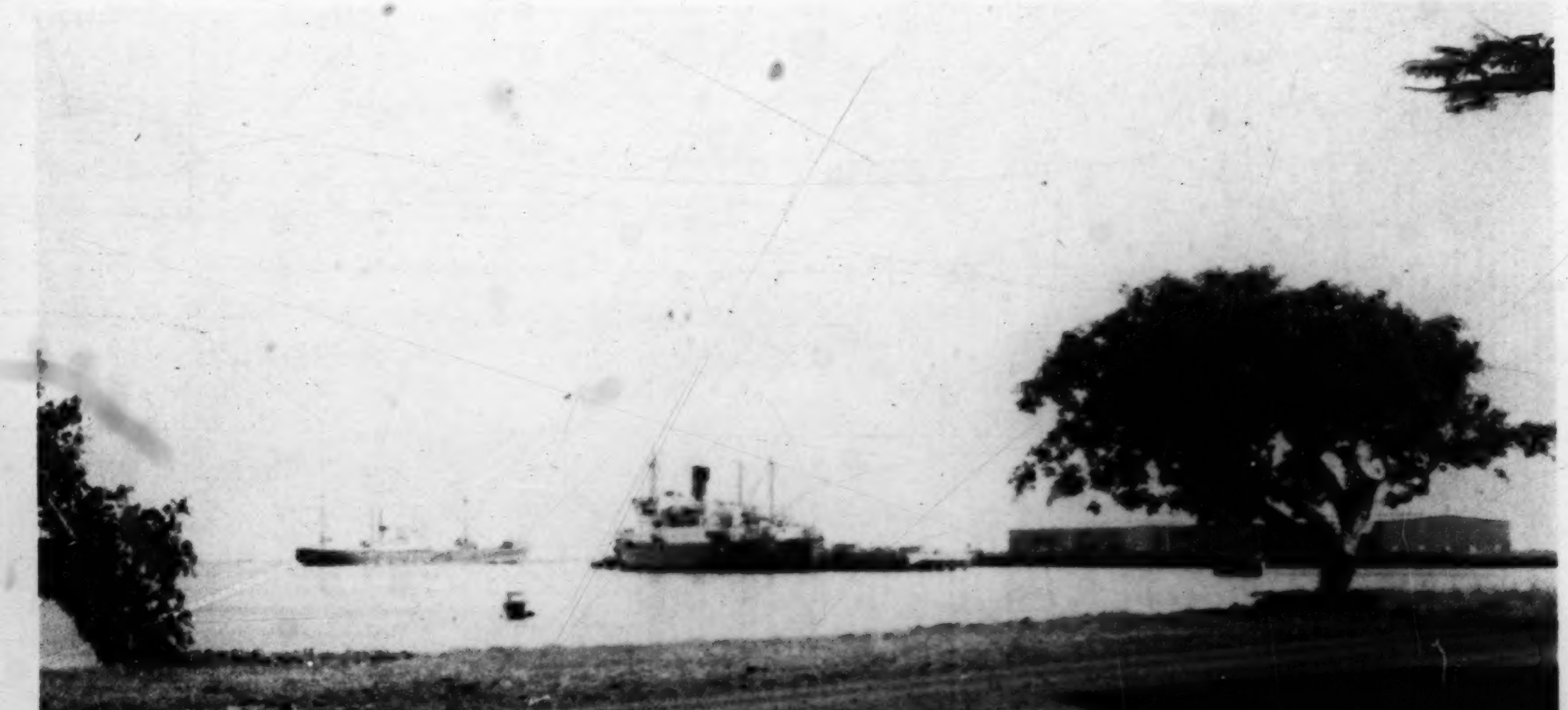
Cut-copra laid out to be sun dried



Small Crops nursery development

Sawing timber

Inter-island ferries at berth



Ships at anchor and berthed

Copra and Cocoa being loaded on freighter

Copra finds a ready market

Section VII

An Analysis of Western Samoa's Trade in 1965

This analysis is an effort to indicate the pattern of Samoa's trade with overseas countries. For this country trade constitutes a major share of all economic activity and particularly the export of agricultural crops is the source through which Western Samoa earns the overseas currency to finance its imports. With very few exceptions, almost all goods used for consumption and investment come from overseas and a change in the pattern of imports and exports will provide one of the indicators to specific trends in the development of the country. For the time being only figures for 1965 are analyzed, but in the future it will certainly be possible to make comparisons with other years.

A minor statistical complication is caused by the fact, that import and export statistics are published, both by the Customs Department and by the Bank of Western Samoa. Unfortunately, the figures published by these institutions differ slightly and all attempts to reconcile the two sets of information have so far failed. As far as exports are concerned, figures provided by the Customs Department have been used, because it is felt that these statistics show the actual physical exports. In preparing estimates of the Balance of Payments, figures for imports supplied by the Bank of Western Samoa were used. Unfortunately, no full breakdown by commodity is available from this source and Customs figures were used on detailed imports. Moreover, in 1965 the difference is small. Total imports of goods according to Customs statistics equalled £3,290,348 in 1965. Adding all Government imports recorded by the Bank of Western Samoa to Government imports financed through its own overseas account, the situation is as follow:

Total Commercial Imports in 1965	£2,446,861
Government Imports financed through the Bank in 1965	385,306
Government Imports financed through its own overseas account	364,694
	£3,196,861

Total Customs imports exceed Bank imports by only £93,487 in 1965. This three percent difference is considered insignificant for this analysis.

The pattern of Samoa's imports is anlyzed in detail with special emphasis on the country of origin of imports by Western Samoa. An overall picture of imports in 1965 is made and a review is made of the pattern of exports.

The Balance of Trade

The available evidence indicates a concentration of Western Samoa's trade with only a few nations. In view of the preferential status offered to Commonwealth countries most trade is conducted with them. Moreover, the geographical position of Western Samoa provides additional advantages to countries such as New Zealand and Australia. Table XVII (p. 48) shows Western Samoa's trade with major trading countries in 1965.

Total trade with all countries equalled some £5,373,765 in 1965 or about £41 per capita of the population. Some £1,884,314 or almost 40% of all trade was with New Zealand. Total imports from New Zealand equalled £965,131, while exports to this country reached a level of £919,183, resulting in a trade deficit of some £45,948. The second most important trade partner was the United Kingdom with imports by Western Samoa totalling £325,631 and exports some £303,019. Trade with all other major countries resulted in either a deficit or a surplus of over £50,000. The country with which Western Samoa has the biggest unfavourable balance of trade is Australia. It ex-

TABLE XVII
WESTERN SAMOA'S TRADE WITH MAJOR TRADING COUNTRIES IN 1965

	Total Trade £	Imports £	Exports £	Balance £
New Zealand	1,884,314	965,131	919,183	— 45,948
United Kingdom	628,650	325,631	303,019	— 22,612
Australia	621,297	608,531	12,766	—595,765
Western Germany	389,823	136,093	253,730	+117,637
Japan	372,156	304,381	67,775	—236,606
United States of America	335,973	320,052	15,921	—304,131
American Samoa	110,231	7,396	102,835	+ 95,439
Netherlands	335,848	10,214	325,634	+315,420
Fiji	120,768	120,519	249	—120,270
Republic of South Africa	115,942	115,942	—	—115,942
Hong Kong	98,568	98,568	—	98,568
Canada	89,480	89,426	54	—89,372
Denmark	57,620	396	57,224	+ 56,828
Saudi Arabia	45,824	45,824	—	— 45,824
Indonesia	39,698	39,698	—	— 39,698
Trade with major countries	5,246,192	3,187,802	2,058,390	—1,129,412
Other Trade	127,573	102,546	25,027	— 77,519
TOTAL TRADE	5,373.765	3,290,348	2,083,417	—1,206,931

Source: Adapted from information provided by the Collector of Customs.

ported to Western Samoa goods totalling some £608,531 and purchased only a negligible £12,766 worth of goods from this country. A positive contribution to the Balance of Trade was made by Western Germany, with imports from this country by Western Samoa totalling £136,093 and exports to this country reaching £253,730. Huge deficits are also noticeable with countries such as Japan (£236,606); United States (£304,131 less £95,439 (American Samoa) = £208,692); Fiji (£120,720) and South Africa (£115,942). As a primary agricultural producer, Western Samoa has only a limited number of exports while it imports a variety of finished products causing the large trade imbalances.

As already mentioned, trade with Commonwealth countries is much more important, than with non-Commonwealth countries.

In Table XVIII a breakdown for the two groups is shown:

TABLE XVIII
WESTERN SAMOA'S TRADE WITH COMMONWEALTH AND NON-COMMONWEALTH COUNTRIES: 1965

	Total Trade £	Imports £	Exports £	Balance £
Commonwealth countries	3,502,449	2,266,134	1,236.315	—1,029.819
Non Commonwealth countries	1,871,316	1,024,214	847,102	— 177,112
TOTAL:	£5,373,765	3,290,348	2,083,417	—1,206,931

About two thirds of Western Samoa's total trade in 1965 was maintained with Commonwealth countries. Unfortunately, the bulk of this trade consisted of imports, resulting in a huge unfavourable Balance of Trade totalling some £1,029,819. In comparison trade relations with non-Commonwealth countries were more even. Total imports from this group of countries equalled £1,024,214 and exports totalled £847,102, leading to a comparatively small imbalance of £177,112. The significant difference between the two groups is explained partly by the competitive position of Australian manufactured products as compared with United States and European products, the major sales of copra and cocoa to non-Commonwealth countries such as the Netherlands and Western Germany and the preferential tariff treatment given to Commonwealth countries.

In order to compare the degree of concentration of Western Samoa's trade network with other countries, the Hirschman index can calculated. This index is defined as the square root of the percentage share of countries in the exports or imports of a country. A complete dispersion would yield and index of 10, while exports and imports with just one country gives an index value of 100. The index value for Western Samoa's exports equals 51, while the import index is equal to 39. These values show a fair dispersion of Western Samoa's trade. Actually, the index values are smaller than the values measured for a number of small countries. Unlike most smaller countries, Western Samoa does not seem to concentrate its foreign trade as much. Presumably this is due to the peculiar geographic position of Western Samoa. While most smaller countries have a high value for the Hirschman index because of their satellite position with regard to their large neighbour, Western Samoa is relatively far away from both importers and exporters.

The Pattern of Samoa's Imports - by Commodity Group

The import figures from Customs Department for 1965 present a definite trend towards a concentrated pattern of trade. In order to facilitate a proper analysis of the import pattern, all Samoan imports have been classified according to dfferent commodity groups.

In the following sub-sections the imports under each commodity group are reviewed and the relative importance of each country is analyzed together with the specific items in which these countries have specialised.

Foodstuffs

New Zealand provides a major share of imported foodstuffs. Of total imports of foodstuffs for human consumption equalling £1,016,968, some £435,105 or almost 43% was supplied by New Zealand. The most important foodstuffs purchased from New Zealand include meat (£280,238); milk and cream (£30,398) and butter (£25,391). The second largest exporter of foodstuffs to Western Samoa is Australia with £264, 201 or 26% of the total. Main items imported from Australia include flour (132,450) and rice (£52,481). From South Africa, only one article, tinned fish is imported. This item accounts for £115,332, or 11.3% of total imports of foodstuffs. Fiji provides about 11% of the total imports of foodstuffs. The only important items are cabin biscuits (£16,877) and sugar (£95,119). United States of America exports a wide range of foodstuffs to Western Samoa, though no custom item reached a level over £10,000. The total amounts to £38,534 or 3.8% of total imports. The same is true for imports from United Kingdom. Out of a total of 38 custom item for foodstuffs, United Kingdom appears on 27 of them, though never with a value exceeding £5,000. Total imports from United Kingdom account for only 1.6% of total imports of foodstuffs. Table XIX (p. 50) presents a summary of imports of foodstuffs from different countries.

Some general and obvious conclusions can be drawn. Most perishable foodstuffs are purchased from nearby countries such as New Zealand and Australia. In spite of the flat 15% duty rate on imports of flour, this commodity is not purchased from the USA. Presumably, competitive freight rates and regular shipping service from Australia play a role. South Africa is able to overcome

TABLE XIX

IMPORTS OF FOODSTUFFS: BY COUNTRY: 1965

Country	Value of Imported Foodstuffs	Percentage of total imports	Major Items
New Zealand	£435,105	42.8%	Meat (£280,238), milk and cream (£30,398), butter (£25,391) and ice cream (£20,696).
Australia	£264,201	26.0%	Flour (£132,450) and rice (£52,481).
South Africa	£115,332	11·3%	Tinned fish only.
Fiji	£112,610	11.0%	Sugar (95,119).
U.S.A.	£ 38,534	3.8%	Wide range of foodstuffs.
United Kingdom	£ 15,784	1.6%	Wide range of foodstuffs.
Other	£ 35,402	3.5%	Wide range of foodstuffs.
TOTAL:	£1,016,968	100.0%	

expensive freight rates with a cheap f. o. b. price, so that tinned fish is obtained from this country rather than from the established factories in nearby American Samoa. Imports of a wide range of foodstuffs from both U. S. A. and United Kingdom consist mainly of luxury items, for which demand depends more on quality than on the price of the product.

Alcoholic Beverages

Of imports of alcoholic beverages totalling £70,827, some £32,049 or 45.2% were imported from New Zealand. The bulk (£31,972) consisted of beer. Australia exported £21,510 worth of alcoholic beverages to Western Samoa, equal to 30.4% of the total. A substantially smaller share was taken by United Kingdom, with £12,716 or 18·0% of the total. Table XX presents a summary of alcoholic beverages by country.

TABLE XX

IMPORTS OF ALCOHOLIC BEVERAGES BY COUNTRY: 1965

Country	Value of Imports	Percentage of Total Imports	Major Items
New Zealand	£32,049	45.2%	Beer (£31,972)
Australia	21,510	30.4%	Beer (£21,074)
United Kingdom	12,716	18.0%	
Other	4,552	6.4%	
TOTAL:	£70,827	100.0%	

Tobacco

As far as imports of tobacco are concerned, there is a definite shift of imports from the cheaper kinds of tobacco to the more expensive kinds of cigarettes. E.g. from only £16,763 in 1964, imports of cigarettes increased to £24,517 in 1965. At the same time, import of tobacco fell from £85,401 in 1964 to £68,057 last year. Hence not only a shift in the pattern of consumption but also an absolute decline of the total occurred presumably due to higher import duties in 1965.

Here again New Zealand provides most of the imports, accounting for 71.3% of total imports of tobacco. These imports consist mainly of tobacco (£66,986). Australia sells to Western Samoa most imports, accounting for 71.3% of total imports of imports totalling some £22,312. The summary breakdown is shown in Table XXI.

TABLE XXI

IMPORTS OF TOBACCO BY COUNTRY: 1965

Country	Value of Imports	Percentage of Total Imports	Major Items
New Zealand	£67,531	71.3%	Tobacco (£66,986)
Australia	23,238	24.6%	Cigarettes (£22,312)
Other	3,888	4.1%	
TOTAL:	£94,657	100.0%	

Textiles

This category includes cotton materials as well as curtains and drapery. Total imports of textiles equalled £255,398 in 1965. If import duty and profit mark up of the firms are added, the consumption of textiles is estimated to exceed £3 per capita in 1965. As could be expected, the countries of origin differ considerably from those shown for foodstuffs, tobacco and alcoholic beverages. With cheap labour rates, Far Eastern countries such as Japan and Hong Kong share a major part of the Samoan market for textiles. Japan now provides textiles worth £98,950 or 38.7% of the total imports of textiles. Next on the list is Hong Kong with £60,912 or 23.8% of the total. Surprisingly, United Kingdom has been able to keep a substantial part of the market, with some £30,466 or 11.9% of total imports. These and other imports are summarised in Table XXII. No special items are quoted as textiles are considered to be a fairly homogeneous commodity making it hard to distinquish between different customs items.

TABLE XXII

IMPORTS OF TEXTILES BY COUNTRY: 1966

Country	Imported Value	Share of the Total
Japan	£98.950	38.7%
Hong Kong	60,912	23.8%
United Kingdom	30,466	11.9%
India	21,282	8.3%
United States	20,035	7.8%
Other	23,753	9.5%
TOTAL:	£255,398	100.0%

Machinery, Equipment and Tools

The total value of machinery, equipment and tools imported by Western Samoa equalled £468,195 in 1965. This included substantial government imports, both for Harbour Development and other investments. For example, Western Germany ranks second in 1965, with £115,932 or 24.3% of total imports of machinery etc., because government decided to purchase two diesel generators from this country. For comparison it is mentioned, that total imports from Western Germany in this category in 1964 equalled only £8,883. U.S.A. takes a major share of all imports in this category with some £124,614 or 26.6% of the total. This includes a wide variety of hardware, totalling £84,029. United Kingdom is in third place with £92,491 worth of goods or 19.8% of total imports of machinery, equipment and tools. Table XXIII provides a breakdown by country of imports in this category.

TABLE XXIII

IMPORTS OF MACHINERY, EQUIPMENT AND TOOLS: BY COUNTRY, 1965

Country	Imported Value	Share of the Total	Major Items
U.S.A.	£124,614	26.6%	Hardware (£84,029)
Western Germany	113,932	24.3%	Generators
United Kingdom	92,491	19.8%	Hardware (£28,409)
New Zealand	52,465	11.2%	
Australia	51,467	11.0%	
Japan	21,531	4.6%	
Other	11,695	2.5%	
TOTAL:	£468,195	100.0%	

Transport Equipment

In 1965 additional restrictions were placed on the import of motor vehicles and this policy has had an impact on the import of cars. Therefore total import of transport equipment (including motor-launches) equalled only £148,523 in 1965. A breakdown by country is shown in Table XXIV.

TABLE XXIV

IMPORTS OF TRANSPORT EQUIPMENT: BY COUNTRY, 1965

Country	Imported Value	Share of the Total	Major Items
United Kingdom	£45,211	30.4%	Trucks and buses (£19,422)
U.S.A.	43,221	29.1%	Trucks and buses (£14,225)
Japan	29,275	19.7%	Trucks and buses (£19,210)
Australia	11,986	8.1%	
Canada	9,608	6.5%	
Other	9,222	6.2%	
TOTAL:	£148,523	100.0%	

Imports of motor vehicles from United Kingdom retain first place totalling some £45,211 or 30.4%. U.S.A. is second with some £43,221 or 29.1% of the total. Japan is increasing its share of the market and provided some £29,275 worth of goods or 19.7% of total imports. It is evident, that trucks and buses constitute the bulk of imports in this group as import of private cars has been drastically reduced, from 185 cars worth some £88,261 in 1964 to 56 car worth some £31,772 in 1965. Unfortunately, there is an increase in the cost per car from £477 in 1964 to £567 in 1965, partly offsetting the savings from the decline of the number of cars imported.

Mineral Fuels, Lubricants and related Materials

This group includes motor spirits, lubricants and a few minor items. A breakdown by country is shown in Table XXV.

TABLE XXV

IMPORTS OF MINERAL FUELS, LUBRICANTS AND RELATED MATERIALS: BY COUNTRY, 1965

Country	Imported Value	Share of the Total	Major Items
Saudi Arabia	£45,824	40.3%	Motor Spirits (£26,362)
Indonesia	39,320	34.6%	Motor Spirits (23,827)
Australia	22,101	19.5%	
Other	6,365	5.6%	
TOTAL:	£113,610	100.0%	

Total imports in this group equalled some £113,610, with a major share being spent on motor spirits. In 1965, such oil producing countries as Saudi Arabia and Indonesia supplied the bulk of these products, with £45,824 coming from the former and a total of £39,320 being purchased from the latter. Obviously, the country of origin depends on the policy of the oil companies with respect to their deliveries. Therefore, it is quite possible that in 1966 motor spirits will be supplied through Singapore, as happened in 1963 and 1964. Australia supplies most of the more sophisticated lubricating and other kinds of oil.

Chemicals

This group includes not only a wide variety of drugs, but also soap and paints. Table XXVI contains a breakdown of imports by country in 1965.

TABLE XXVI

IMPORTS OF CHEMICALS, BY COUNTRY,1965

Country	Imported Value	Share of the Total	Major Items
New Zealand	£65,053	41.3%	Soap (£45,369)
Australia	58,197	36.9%	Soap(17,683), Drugs
United Kingdom	18,683	11.8%	Drugs
Other	15,706	10.0%	
TOTAL:	£157,639	100.0%	

Total imports of chemicals equalled only £157,639 in 1965, stressing the negligible application of fertilizer in Western Samoa's agriculture. New Zealand provided £65,053 worth of goods, or 41.3% of the total and supplied some £45,369 worth of soap and detergents. Three countries, United Kingdom, New Zealand and Australia provide a major share of all drugs imported by Western Samoa. Australia holds the second place in this group with some £58,197 or 36.9% of the total, while United Kingdom exported to Western Samoa £18,683 worth of goods or 11.8% of total imports of chemicals.

Raw Materials

Western Samoa imports only a narrow range of raw materials. These includes cement, steel plate and timber. The import of timber is of particular interest to the country. Table XXVII shows a breakdown of imports of raw materials.

TABLE XXVII

IMPORTS OF RAW MATERIALS, BY COUNTRY, 1965

Country	Imported Value	Share of the Total	Major Items
New Zealand	£215,858	56.4%	Timber for shooks (£182,625)
Canada	64,345	16,8%	Treated Timber (£60,361)
Australia	46,408	12.1%	Metal Sheets (30,858)
Japan	38,432	10.0%	Cement (30,502)
Other	17,657	4.7%	
TOTAL:	£382,700	100.0%	

Total imports of raw materials equalled £382,700 in 1965. Imports from the two most important suppliers, New Zealand and Canada, included mainly timber, with New Zealand selling to Western Samoa £182,625 worth of timber used for the manufacture of banana shooks, and Canada supplying some £60,361 worth of treated timber. Japan provided almost all cement used in 1965. From Australia came the bulk of metal sheets used in construction, totalling some £30,858 of imports in this category.

Other Manufactured Goods

This group includes a large number of manufactured goods. It includes some miscellaneous customs items that are not classified under any of the other headings. Altogether some 89 customs items and sub-items are included. Table XXVIII (p. 55) presents a breakdown by country of the imports of other manufactured goods in 1965.

In addition to the information contained in the previous tables, Table XXVIII shows, by country, the number of items imported in 1965. Total imports in 1965 equalled some £581,831. Surprisingly, Japan provided almost one-fifth totalling some £113,698. However, this includes substantial imports for Harbour Development that will not be repeated next year. Japan also exported to Western Samoa a total of £16,500 worth of radios and television sets. Australia supplied some £103,687 in manufactured goods or 17.8% of the total. Only a few items exceeded a value of £10,000. These were plywood (£10,047) and perfumery and toilet preparations (£10,464). For the rest, the degree of diversification of Australian exports of manufactured goods to Western Samoa is illustrated by the fact, that these imports covered a total of 73 customs items. The same number was shipped by the United Kingdom. This country accounted for some £97,131 or 16.7% of manufactured goods imported in Western Samoa, but very few items exceeded a total value of £5,000. These included perfumery and toilet preparations £5,161), stationery (£9,872) and cartridges (£5,291).

TABLE XXVIII

IMPORTS OF OTHER MANUFACTURED GOODS: BY COUNTRY: 1965

Country	Imported Value	Share of the total	No. of items	Major Items
Japan	£113,698	19.5%	55	Metals imported with approval of the Minister (£39,645)
Australia	103,687	17,8%	73	Plywood (10,047) and perfumery (10,464)
United Kingdom	97,131	16.7%	73	Stationary (9,872), cartridges (5,291)
New Zealand	89,647	15.4%	79	
United States	73,190	12.6%	60	
Hong Kong	26,645	4.6%	39	
India	15,645	2.7%	10	
Other	62,190	10.7%		
TOTAL:	£581,831	100.0%	89	

As far as New Zealand is concerned, exports of manufactured goods to Western Samoa totalled £89,647 in 1966,giving this country 15.4% of the market in this group. Here again, trade was spread over a great number of items, including stationery (£7,354) and food for animals (£6,311). U.S.A. supplied a total of £73,190 of other manufactured goods, accounting for 12.6% of total imports. Imports of signficant importance included rubber manufactures (£12,718) and special kinds of metal (£10,828).

Hong Kong and India share a minor portion of the market of imported manufactured goods, supplying respectively £26,643 and £15,645 worth of goods. A great number of other countries provide the remaining imports.

The Overall Picture of Imports in 1965

The pattern of trade presented does not distinguish between private imports and government imports, because no separate classification for the two is used in the Customs statistics. In 1965 Government imports accounted for about £750,000 of the total. This was a direct result of the Harbour Development and the purchase of diesel generators.

Table XXIX (p.57) shows a breakdown of imports of goods by commodity group and by major trading partners. Reading through the table horizontally, for each group of commodities the major trading partners are listed. E.g. the second row indicates that Alcoholic Beverages were mainly imported from New Zealand (£32,049), Australia (£21,510) and United Kingdom (12,716). The column "Total of All Small Entries" shows for each country mentioned in the table the total of all its entries (i.e. entries of less than significant interest to the determination of the general import pattern). Reading through it vertically the table shows for each major country the commodity groups that were mainly imported by Western Samoa. E.g. from Hong Kong were imported Textiles (£60,912) and Other Manufactured Goods (26,643). The column "All Other Countries" presents for each commodity group the total of all other imports of less importance than mentioned in each row. The column "All Countries" shows the total expenditure in 1965 for each imported commodity group. The last column shows the percentage of each import to total imports of all goods by Western Samoa.

Foodstuffs is by far the most important commodity group. In 1965 this group totalled some

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THE PATTERN OF IMPORTS IN WESTERN SAMOA BY COU

Commodity Group	New Zealand	Australia	United Kingdom	U.S.A.	Japan	Western Germany
Foodstuffs	435,105	264,201	15,784	38,534	—	—
Alcoholic Beverages	32,049	21,510	12,716	—	—	—
Tobacco	67,531	23,238	—	—	—	—
Textiles	—	—	30,466	20,035	98,950	—
Machinery, equipment and tools	52,465	51,467	92,491	124,614	21,531	113,932
Transport equipment	—	11,986	45,211	43,221	29,275	—
Mineral Fuels	—	22,101	—	—	—	—
Chemicals	65,053	58,197	18,683	—	—	—
Raw Materials	215,858	46,408	—	—	38,432	—
Other Manufactured Goods	89,647	103,687	97,131	73,190	113,698	—
Total of all small entries	7,423	5,736	13,149	20,458	2,495	22,161
TOTAL:	965,131	608,131	325,631	320,052	304,381	136,093

a) This column includes imports form countries not listed as well as the total of all small entries. The total small entries (£190,430) subtracted from the column total (£108,843) gives the imports from all other countries (£81, 587).

£1,016,968 and sonstituted about 31% of all imports of goods. In order to ascertain the significance of foodstuffs in the scope of all imports, Table XXX (p. 58) presents information on the import of this group, between 1962 and 1965 and a breakdown in major items.

Imports of foodstuffs in 1965 were slightly lower than 1964, £1,016,968 versus £1,029,789. In previous years, there was a growth of 6.3% and 2.3% respectively and in view of the population pressure a slow upward trend should be expected. As will be pointed out, the bulk of imports of foodstuffs consists primarily of staple goods, for which consumption is bound to rise with the growth of the population. So, unless import substitution of such commodities as meat and fish is initiated on a really large scale, imports of foodstuffs might equal over £1,200,000 by 1970. The eight different goods mentioned in Table XXX constitute the bare necessities, equalling some £824,029. Purchases of these goods have grown by a total of £54,481 in three years time, an average of 2.3% annually. This, of course, is less than the estimated expansion of the population each year, and any relaxation of import restrictions may lead to a sudden expansion of imports of these commodities. Disregarding price fluctuations of these commodities on the world market, total imports of these necessities may reach an estimated £985,000 by 1970. Moreover, these figures show that only a minor share of all funds is spent on foodstuffs other than bare necessities.

The largest single commodity among these 8 items is meat, both fresh or frozen. A rise in prices has contributed to an increase of the value of these imports from some £248,624 in 1962 to £293,252 in 1965. Imports of fish decreased from £169,093 in 1962 to £156,181 in 1965, partly because of a

BY GROUP OF COMMODITY: 1965 (£SAMOAN)

h Africa	Hong Kong	Canada	Saudi Arabia	Indonesia	India	All Other Countries a)	All Countries	Each Commodity Group as a percentage of total imports.
115,332	—	—	—	—	—	35,402	1,016,968	30.9%
—	—	—	—	—	—	4,552	70,827	2.1%
—	—	—	—	—	—	3,888	94,657	2.9%
—	60,912	—	—	—	21,282	23,753	255,398	7.8%
—	—	—	—	—	—	11,695	468,195	14.2%
—	—	9,608	—	—	—	9,222	148,523	4.5%
—	—	—	45,824	39,320	—	6,365	113,610	3.5%
—	—	—	—	—	—	15,706	157,639	4.8%
—	—	64,345	—	—	—	17,657	382,700	11.6%
—	26,643	—	—	—	15,645	62,190	581,831	17.7%
610	11,013	15,473	—	378	2,038	—		—
115,942	98,568	89,426	45,824	39,698	38,965	(81,587)	3,290,348	100.0%

sudden fall between 1962 and 1963 of the number of tons imported, partly also because of a shift of purchases to the less expentive South African market. Imports of flour have climbed steadily from 54,680 hundredweight in 1962 to 71,784 hundredweight in 1965. The total value of imported flour in 1965 equalled some £134,991 and is almost constant compared with 1964. Clearly, Western Samoa has benefited by the downward trend of the price of flour on the world market. The same is true for sugar. However, the sharp fall in the world sugar price is hardly reflected in the import statistics. During the 1962-1965 period, the total value remained almost constant and equalled £108,507 in 1965. At the same time physical imports increased 4.6% annually from 2,651 tons in 1962 to 3,020 tons in 1965.

In 1965 the nation spent £53,824 on the import of rice, almost all of it bought from Australia. Imports of rice have fluctuated between 900 tons and 1,060 tons and average 965 tons during the 1962-1965 period. Imports of milk and cream decreased from £35,167 in 1962 to £33,927, in 1965, while the quantity imported remained constant at 192 tons. Imports of butter moved slowly upward from 89 tons valued at £24,093 in 1962 to 97 tons valued at £25,445 in 1965.

Imports of cabin or ships' bread declined dramatically after the start of production of the new factory in Western Samoa. From a maximum expenditure of £35,101 for 260 tons in 1963, imports declined to only £17,892 or 119 tons in 1965. Import of cabin bread will continue to fall as the factory increases its production while at the same time import of flour will increase.

Imports of alcoholic beverages and tobacco are only of minor importance in the context of total imports. Still, together these commodities account for 5% of total imports. Imports of these goods constitute an ever growing presence of luxury items on the import side.

As could be expected, imports of textiles are of considerable importance. Imports totalled some £255,398 or 7.8% of total imports of goods. At a rate of almost £65,000 per quarterly period, im-

TABLE XXX

IMPORTS OF FOODSTUFFS: 1962—1965 — A BREAKDOWN BY MAJOR ITEMS

		1965		1964	1963	1962
Total Imports of Foodstuffs		£1,016,968		£1,029,789	£968,607	£946,894
Change compared with previous year		—2.2%		6.3%	2.3%	
Some Major Items						
1. All kinds of meat	value	293,252		272,624	258.876	248,624
	quantity	1,515	tons	1,675	1,920	1,336
2. All kinds of fish	value	156,181		139,495	135,759	169,093
	quantity	1,758	tons	1,563	1,434	1,692
3. Flour	value	134,991		135,832	124,773	107,370
	quantity	71,784	cwt	64,407	64,001	54,680
4. Sugar	value	108,507		103,719	108,919	105,178
	quantity	3,020	tons	2,604	2,572	2,651
5. Rice	value	53,824		66,873	58,828	55,269
	quantity	903	tons	1,057	985	915
6. Milk and Cream	value	33,937		38.474	36,361	35,167
	quantity	192	tons	216	218	192
7. Butter	value	25,445		29,417	25.911	24,093
	quantity	97	tons	126	98	89
8. Biscuits, Cabin or ships' Bread	quantity	17,892		32.295	35,101	24.754
	value	119	tons	235	260	268
TOTAL OF MAJOR ITEMS:		£824,029		£818.729	£784,528	£769,548

ports of textiles take a substantial share of the overseas currency allocation of firms. Actually the average firm spends about 10% of its allocation on textiles. Machinery, equipment, tools and transport equipment includes substantial imports of goods for use by Government and investment in Harbour Development. Hence the total for both items, equalling some £616,718 or 18.7% of total imports, may have been inflated in 1965. Mineral fuels is only a small item, totalling £113,610 or 3.5% of totoal imports. However, these imports are of major interest to Government as an important revenue earner.

As already mentioned in the previous section, imports of chemicals are insignificant and totalled some £157,639 or 4.8% of total imports in 1965. Moreover, these imports comprised mainly drugs. This item must be expected to grow considerably as soon as fertilizers are applied on a larger scale. In 1965 imports of raw materials totalled some £382,700 or 11.6% of total imports. Surprisingly, timber about the only raw material that is in abundant supply in Western Samoa, accounts for almost 75% of total imports of raw materials, because it is used to manufacture the shooks used for export of bananas to New Zealand.

Total imports of Other Manufactured Goods equalled £581,831, or 17.7% of total imports. This group contains both luxuries such as watches and television sets as well as durable necessities such as books for educational purposes. Total imports in this group are obtained by accumulating 89 different customs items, each of which is not of very great importance.

As already indicated, Western Samoa trades more with New Zealand than any other country. Table XXIX indicates that imports to this country lie mainly in the field of foodstuffs, raw materials and tobacco. Its share in Other Manufactured Goods, totalling some £89,647 amounts to an average of only £1,000 per item. Australia is able to compete in all commodity groups, except textiles. The major emphasis is in foodstuffs totalling some £264,201 in 1965. On a smaller scale, the same is true for the United Kingdom. As imports equalled only £325,631 in 1965, its share in each commodity group is less substantial.

Imports from U.S.A. included machinery and equipment (£124,614) and the more expensive non-durable and durable consumer goods for which a market is found among the higher income classes in Western Samoa. Japan supplied a major share of all textiles and also provided a number of other manufactured goods. As far as import of cement is concerned, Japan has a near monopoly in Western Samoa. Its share in the machinery, equipment and transport equipment import sector is growing fast, though the restruction on import of motor vehicles will have a limiting effect.

All other countries were specialised in only one commodity group or one commodity. These are Western Germany (machinery and equipment). Fiji (foodstuffs), South Africa (tinned fish), Hong Kong (textiles), Canada (timber), Saudi Arabia (mineral fuels), Indonesia (motor spirits) and India (textiles).

The Pattern of Western Samoa's Exports

In comparison with imports, the pattern of exports is relatively simple. It reflects the economic situation in a country with hardly any manufacturing industry and income mainly derived from export of agricultural produce. Table XXXI (p. 60) shows a breakdown by country and by main crops of all goods exported by Western Samoa.

Total exports of goods (including re-exports) equalled some £2,083,417. In 1965 the largest income earner to the country was copra with exports totalling some £839,138 or 40% of total exports (including re-exports). The second most important crop was bananas with some £609,873 exported in 1965. This amounted to 29.3% of the total. Export of cocoa beans was third with only £450,450 or 21.6% of total exports. Other dutiable produce accounted for almost 5% of exports in 1965. The bulk of these sales consist of taro to New Zealand and American Samoa. Export of Samoan furniture equalled some £17,625 in 1965 or less than 1% of total exports. Re-exports of previously imported commodities totalled £53,406 in 1965. Considerable purchases of goods are made by firms in Western Samoa for resale to merchants in American Samoa. This trade amounted to £35,407 in 1965.

By country, New Zealand took most of Western Samoa's production for export. New Zealand has agreed to purchase Samoa's banana crop for a fixed price. Of total exports to New Zealand which equalled £919,183 in 1965, exports of bananas accounted for some £609,873. Other exports of considerable importance were copra with some £224,786 and £51,921 worth of taro and other small crops.

The second most important buyer of Samoan produce was a non-Commonwealth country, the Netherlands, which bought a total value of £325,634. Included in these exports were some £253,712 worth of copra, equalling 37% of total last year's export production of copra. United Kingdom purchased copra (£157,211) and cocoa beans (£143,470) and a few other items altogether totalling some £303,019. West Germany was a good purchaser of Samoan cocoa and bought some £253,712 worth of cocoa beans or more than 55% of total last year's export crop.

American Samoa imported a total of £48,456 of taro and other food crops. The American Samoan Government also assisted in developing the manufacture of Samoan furniture by placing orders for furniture totalling some £17,625. Various other countries bought Western Samoa's exports. These included Denmark (copra - £57,224), Venezuela (copra - £21,272), United States (cocoa beans - £15,410) and Australia (cocoa beans - £11,741).

TABLE XXXI

THE PATTERN OF WESTERN SAMOA'S EXPORT: 1965 (IN £ SAMOAN)

Commodity	New Zealand	United Kingdom	Netherlands	Western Germany	American Samoa	Japan	Denmark	Venezuela	U.S.A.	Aust.	All Other Countries	Total	Each commodity as a percentage
Copra	224,786	157,211	311,302	—	—	67,343	57,224	21,272	—	—	—	839,138	40.3%
Cocoa Beans	13,855	143,470	10,057	253,712	—	—	—	—	15,140	11,741	2,475 (Italy)	450,450	21.6%
Bananas	609,873	—	—	—	—	—	—	—	—	—	—	609,873	29.3%
Samoan Furniture					17,625	—	—	—	—	—	—	17,625	.8%
Other dutiable Produce	51,921	—	—	—	48,456	432	—	—	—	—	107	100,916	4.8%
All Other Items	3,438	1,441	4,275	18	1,347	—	—	—	781	339	370	12,009	.6%
Re-export	15,310	897	—	—	35,407	—	—	—	—	686	1,106	53,406	2.6%
TOTAL	919,183	303,019	325,634	253,730	102,835	67,775	57,224	21,272	15,921	12,766	4,058	2,083,417	100.0%

In comparing the pattern of exports with previous years, there appear to be two steady trading partners, namely New Zealand and to a lesser extent United Kingdom. Confining this argument to the three major crops only, total exports of these crops to New Zealand equalled some £1,096,843 in 1964 and some £1,050,279 in 1963. The fall of exports in 1965 is entirely due to last year's decrease in output of bananas. Exports of these crops to United Kingdom have gradually declined from £654,381 in 1963 and £398,876 in 1964 to 1965's £300,681. At the same time imports of goods from that country have diminished and it can, therefore, be said that the role of the United Kingdom as a trading partner is almost less than half as important as it used to be. Most of the British export trade has been shifted to Continental European countries such as Western Germany and the Netherlands.

In 1964, Western Germany was the leading country with the purchase of some £509,246 of cocoa beans and copra imports from Western Samoa, while last year saw a growing importance of the Netherlands with imports totalling slightly over £320,000. As far as other countries are concerned, no regular pattern exists. In 1965 the United States has not kept up its purchases, with exports to that country falling from £210,635 in 1964 to only £15,921 last year.

Section VIII

Estimated Balance of Trade and Balance of Payments by 1970

Projection of Exports

Western Samoa's exports largely depend on three major agricultural crops. These crops are subject to changes beyond the control of the nation. Disease, weather, world price changes, all serve to limit the accuracy of any projections. Nevertheless, such projections are needed in order to indicate the problems that can occur with current trends and suggest the action that should be taken to alleviate such problems and enhance, as much as possible, the economy of the country.

The capacity to export is reflected in the results of the previous years. This projection of exports will take into account the past experience, contemplated development projects and subsequent increase in physical output, and changes in prices. Table XXXII shows the exports of the three main crops cocoa, copra, bananas and the accumulated total of all other exports.

TABLE XXXII

WESTERN SAMOA'S EXPORTS 1962-1965

Commodity		1962	1963	1964	1965
Copra	quantity (tons)	12,806	15,197	15,301	12,370
	value "	£654,905	£871,422	£920,104	£839,138
Cocoa	quantity (tons)	5,258	4,324	4,480	2,991
	value "	£1,165,802	£835,649	£722,307	£454,466
Bananas	quantity (cases)	760,935	687,095	646,170	481,565
	value "	£908,098	£824,964	£790,817	£609,873
All other exports		29,879	66,505	57,967	126,534
Sub-totals		£2,758,684	£2,598,540	£2,491,195	£2,030,011
Re-exports		47,811	37,900	31,602	53,406
TOTAL:		£2,806,495	£2,636,440	£2,522,797	£2,083,417

If projections were based on the achievements during the last four years, the prospects would be very depressing. Between 1962 and 1965, exports of Samoan produce fell by £728,673 or over 25% to some £2,030,011 in 1965. Utilizing the same trend exports would equal about £1.5million by 1970. A number of new development projects are being initiated to counter this adverse trend. With the exception of banana replantings, the effects of most of these projects will not be felt until the end of the five year period. Banana replanting is as much a fight against encroaching diseas as it is development of new areas. The reductio of exports from £760,935 in 1962 to £581,565 in 1965 is primarily the result of the spread of bunchy-top disease.

As far as copra is concerned, a slight increas is projected in view of commercial planting schem during the first half of this decade. The five yea copra planting and replanting schemes will bea the first fruits after at least seven years and hav not been taken into account in these projections. The acreage brought under coconut cultivation during the last five years is not stated in any official statistics, though it is estimated to equal about 250 acres annually. With an average yield of .4 ton per acre, total exports at prevailing yields can be increased by 500 tons, equivalent to an increase of exports by £33,000 in 1970, to a total of some £950,00.

With exports of cocoa the growth prospects are very similar. Unlike the period of the fifties when new roads opened up a large acreage of land for cocoa plantings, no such development took place during the early sixties. Some areas were replanted, but no large-scale planting was initiated. This tendency is also reflected in the export figures. Average export during 1962 - 1965 period equalled about 4,500 tons if allowance is made for the considerable carryover of stocks from 1965 in 1966. Any expansion of cocoa exports wil have to take place as a result of plantings in 1966 and some in 1967, to have any real effect during the five year plan period. Other plantings will be in partial production. On the assumption of an additional 300 acres coming in full production by 1970, total exports may equal some 4,700 tons. At a conservative average price of £165, total exports of cocoa will reach £775,000 by 1970. A much higher or lower cocoa price could, of course, considerably alter these returns.

During the 1966-1970 period the country will still be suffering from the lack of planting and replanting programmes during the last ten years. The fruits of new plantings will be felt after 1970 rather than before that date. All this makes it very clear, that the badly needed expansion in the near future of agricultural exports will have to be realized through a bigger banana output. If World Food Program estimates on new banana plantings and rehabilitation of banana plants are realized, some 8,000 acres will be in full production by 1970. It is hardly likely that yields will exceed an average of 4.5 ton or 150 cases per acre, of which about 50% is assumed to be used for local consumption. Hence, total banana exports are estimated to be about 520,000 cases, worth some £700,000 in 1970.

Exports of taro and other small crops were showing very favourable signs of growth until the hurricane struck Western Samoa. It is expected that they will soon recover and regain their previous level. If in addition to New Zealand and American Samoa the Hawaiian and West Coast U.S.A. markets can be developed in the next five years, these exports would have a bright future and it would be very disappointing if no doubling takes place over the 1966-1970 period. Accordingly, exports are estimated at £250,000 in 1970.

Re-exports mainly to American Samoa are estimated to grow very slowly over the average £42,700 between 1962 and 1965 and could equal about £45,000 in 1970.

Hence total exports may equal some £2,675,000 by 1970. In this way exports will almost regain their 1962 level. However, unless crop conditions or price outlook are very favourable there is no prospect of better results. In the past couple of years the Samoan capacity to export has gradually declined. Plant disease such as the bunchytop disease and the presence of the rhinoceros beetle have effected yields. Rehabilitation will be a very slow process and particularly in the initial years of the 1966-170 period will show little advancement. In view of time lag due to the long period before crops mature and the big task of initiating new agricultural programmes, the benefits from this work will really emerge after 1970.

In the course of the 1966-1970 period, Western Samoa is contemplating the development of its timber resources on the island of Savai'i. The Potlatch Industries Inc. proposal calls for a comprehensive project for this area, entailing the building of main as well as access roads to the forest reserves, a water supply system and some other supplementary investment. Obviously, a development as envisaged by Potlatch will change the whole import and export picture. During the initial years machinery and equipment will be imported. As these imports will be financed by the overseas investor they will have no negative effect on Western Samoa's overseas currency reserves. At the planned rate of production, Potlatch is estimated to ship 15 million board feet of timber annually from its pilot mill in Savai'i. It is very doubtful that this production level will be achieved before 1970. A method must be found to make available large areas for timber milling and tree farming. A contract has to be drafted and signed. A huge investment is to be made and machinery ordered and shipped. The time lag involved as has been experienced with other projects can be of considerable length. A conservative estimate may put the level ef export earnings in 1970 at about 50% of capacity after allowance is made for sale to local users. This amounts to some £200,000. Major changes may appear depending on the progress of this project.

The effect on total exports in 1970 consists of a badly needed increase from £2,675,000 (the total export of crops) to some £2,875,000, the latter representing both crops and receipts from timber operations. Through re-export of previously imported goods, Western Samoa is expected to earn another £45,000 bringing total export earning to some £2.92million in 1970. A summary of 1970 projections of exports is shown in Table XXXIII.

TABLE XXXIII

PROJECTIONS OF WESTERN SAMOA'S EXPORTS—1970

Copra	quantity	(tons)	14,600	
	value	(£)	£950,000	
Cocoa	quantity	(tons)	4,700	
	value	(£)	£775,000	
Bananas	quantity	(cases)	520,000	
	value	(£)	£700,000	
Timber		(£)	£200,000	
Other Exports		(£)	£250,000	
			£2,875,000	
Re-exports			45,000	£2,920,000

A Projection of Imports

As a trading nation, Western Samoa's income depends almost exclusively on export income which is used to finance imports. Other than primary product exports, local industry is very limited. Purchasing power is mainly spent on imported goods. Unfortunately, this trade has shown a sizeable imbalance during the last few years. On the import side, a distinction should be made between Government imports and commercial imports. Although the latter have deliberately been restricted, government has extended its activities recently. Through the initiation of huge projects, such as Harbour Development and to a lesser extent the construction of Alafua College and purchase of new generators, ordinary imports were boosted by at least 25%. The biggest of these projects was financed with an overseas loan and interest payments and redemption of this loan will rest heavily on the invisible account.

In order to prepare a projection of imports between 1966-1970, it is useful to consider briefly the record of imports of goods between 1961 and 1965. A summary is presented in Table XXXIV (p. 65).

A record of imports of goods is maintained both by Customs Department and by the Bank of Western Samoa. Customs information is based on the C.D.V. value of goods plus 10%, while the Bank of Western Samoa uses actual payments made. The difference between the two sets of figures is explained first by the fact that payments and physical imports of goods never coincide completely, resulting in discrepancies at the beginning and at the end of each year. Secondly, during

TABLE XXXIV

IMPORTS OF GOODS IN WESTERN SAMOA: 1961- 1965

	Customs Information	Bank Information	Difference
1961	£2,536,200	n.a.	—
1962	2,861,700	£2,927,800	£66,100
1963	3,006,900	2,917,900	89,000
1964	3,540,500	2,965,900	574,600
1965	3,290,300	2,832,200	458,100

the last two years, substantial government imports, were not shown on the Bank statement on overseas payments, as payments were arranged from the Governments' own reserves in New Zealand.

In order to obtain a proper understanding of the development of imports, it should be pointed out that all commercial imports are governed by a licensing system. Total commercial imports are determined per quarterly period by fixing the total overseas currency allocation of firms. On the other hand Government imports are not subject to a licensing system. Decisions on these imports are made by the Minister of Finance, who is also the authority as far as Government imports are concerned.

In view of the lack of growth of exports during the first half of this decade, imports had to be restricted. Consequently, the emphasis was laid on imports of consumer goods, in particular foodstuffs. For example, the 1965 Trade report prepared by Customs Department, shows that about £1,017,000 or 41% of all commercial imports consisted of foodstuffs. If alcoholic beverages, tobacco and textiles are added, the total of these consumer goods amounts to 58% of commercial imports in 1965. Due to the system of classification, it is impossible to indicate the total of all imports of consumer goods. However, from the items already mentioned it is clear, that imports of investment goods and raw materials constitute only a minor share of imports of goods, both as a result of the foreign currency squeeze and the demand for foodstuffs and other consumer goods. One possible exception is the Harbour Development Scheme. Substantial imports were made for this scheme. The difference between Customs figures and Bank information in 1964 and 1965 as listed in Table XXXIV is almost fully accounted for by payments for Harbour Development.

The projection of imports of goods for the 1966-1970 period can be subdivided into a number of groups, each showing a pattern of growth depending on certain factors. In spite of restrictions on imports, imports of foodstuffs have continued to grow during the 1961-1966 period by an average 2% annually. Only in 1965 were imports slightly lower than during 1964. However, total imports of necessities, such as meat, fish, sugar, rice, milk, butter and cabin breads grew continuously by almost 2.3% annually. The increase of imports of consumer goods depends on the growth of the population and is subject to the amount of overseas currency set aside for this purpose. On the whole, an average rate of growth of 4½% accounting for the population increase and allowing for a growth of demand as a result of the gradual rise in income, is projected for the 1966-1970 planning period. At this rate total imports of consumer goods will equal approximately £1,270,000 by 1970.

Imports of all alcoholic beverages is handled by Government. Since 1962 liquor imports have risen by an incredible 46% annually, though they still account for only about 2% of all commercial imports. It is not expected that imports of this item will continue to maintain this high growth rate. Although a point rationing system is in effect, the opening of a considerable number of additional clubs has considerably increased the number of people who drink imported beer and liquor. If a combination of import reductions and higher prices is instituted and the rate of growth of imports of alcoholic beverages is held to 7% annually, imports would total some £100,000 by 1970. Import of beer and liquor is a big government revenue producing item. The nation's exports income is limited, however, and the outflow of exchange as a result of liquor purchases means that there will be less available for development and the balance of payment situation will be weakened.

Imports of tobacco goods have shown a peculiar pattern during the last four years. Imports rose to £125,000 in 1963, but since then have slowly declined to some £95,000 in 1965. Apparently, two factors have concurrently influenced imports of these commodities. First of all, there was an increase of duty rates in 1965. Secondly, imports of the more expensive brands of packed cigarettes show an increase, while imports of tobacco have declined. For the future, the upward trend in imports of cigarettes will no doubt, persist. At a rate of increase of over 9% annually, this item will total some £39,000 by 1970. Because of the slow fall during the last few years, imports of all other items are not expected to grow during the 1966-1970 period. Hence total imports of all tobacco items is estimated at some £110,000 by 1970.

In 1965 imports of textiles equalled some £225,000 or roughly 10% of all commercial imports. Price fluctuations have a major influence on the development of this item and caused the fall of imports in 1965 compared with 1964. For the future, physical exports are projected to increase at the average rate experienced during the last two years. Prices are assumed to remain constant. In this way total imports of textiles will equal some £290,000 by 1970. This value is the same as 1962 when both prices and physical imports were exceptionally high.

Future imports of machinery and other equipment depend on the investment programmes. In the past (i.e. in 1964 and 1965) imports of equipment for Harbour Development and purchase of diesel generators caused a considerable boast in this item. Imports of machinery should slow down during the 1966-1970 period despite the initiation of hotels and secondary industry. These enterprises are not expected to need costly equipment. In the agricultural sector the opportunities to mechanize the production process are not readily available and equipment needs are limited. Purchases have shown a significant growth averaging between 5 and 10% annually. Moreover, it appears that this growth has been achieved through savings on other items. For the 1966-1970 period the same pattern of growth is assumed, implying imports of machinery, equipment and tools totalling some £610,000 by 1970, compared with 1965 imports equal to £460,195. The latter includes payments on generators bought from Western Germany for the Government Power Scheme, so that the actual growth projection is based on a lower figure.

As far as transport equipment is concerned much will depend on the policy with regard to import of passenger vehicles. Between 1960 and 1965 imports showed a definite expansion, until a special licensing system was introduced for vehicles. Since then, imports of passengers cars have diminished from 185 cars in 1964 to only 56 cars in 1965. At the same time imports of trucks and buses declined from 178 in 1964 to some 88 in 1965. Inevitably, the requirements for replacement of old vehicles should lead to a relaxation of the policy of restriction. It is estimated that for replacement alone some £160,000 anually is needed during the 1966-1970 period.

Total imports of mineral fuels benefited from a slow decline in prices during the last few years. Therefore the 6% annual growth of physical imports of motor spirits did not have its full effect. In view of the world surplus of these goods, it is expected that the low prices will be maintained. Since new secondary industry will have a definite influence on fuel consumption in the coming years, it is assumed that imports of commodities in this class will grow by almost 6% annually. In that case imports of mineral fuels will reach a level of £150,000 by 1970.

Imports of raw materials are dominated by the import of timber for the manufacture of shooks for bananas, totalling some £182,625 in 1965. Attempts are now being made to use local timber or else pack the bananas in cartons. Changes are expected to be realized in the next five years. Consequently it is assumed that imports of timber shooks for bananas will gradually decline to two-thirds of the 1965 level. There could, of course, be a considerable error in this assumption if radical development takes place. Accordingly, it is estimated that imports of this item will equal about £120,000 by 1970. Large-scale timber development is contemplated in Savai'i, which may not only be used to serve overseas markets, but also in import substitution. Therefore, imports of other kinds of timber will probaly decline from its present level. As already indicated there will be a considerable delay before the actual milling of the timber can start. Therefore, the fall of imports of timber is put at £10,000 only, representing most of the rough timber at present imported in Western Samoa. A minor share of imports of raw materials consists of imports of cement for construction purposes. These imports have grown because of new construction contracts such as Harbour Development and building of schools. The same rate of growth of the past, about 3% annually, is applied for the 1966-1970 period. If the pattern outlined above holds true, total imports of raw materials could equal some £360,000 by 1970.

In spite of the tremendous need for the application of fertilizer, imports of all chemicals have been fairly stagnant lately. With a successful introduction of products from the new soap factory, there should be a sharp decline of imports of soap. However, a complete substitution is not expected, as there will always be a demand for the more expensive overseas brands. On a conservative estimate imports under this item may be halved by 1970, implying imports of soap and other detergents totalling some £35,000. It is not expected that imports of paints will diminish any further than they have done since 1963. On the contrary, maintenance jobs and new buildings will necessitate growing use of paint. Accordingly, it is estimate that imports will expand by some 3.5% annually, a little higher than the population growth and amount to some £39,000 by 1970. Under influence of new agricultural development projects and depending on the degree of success in the introduction of fertilizer as an integral part of agricultural production, imports of this commodity will grow between now and 1970. New plantings of copra are estimated to increase the acreage by 7,000 acres in a period of five years. If fertilizer is applied according to instructions issued by the Agriculture Department, additional imports on account of new coconut development alone equal £10,500. Estimates for new cocoa planting vary widely. Some 400 acres is estimated to be planted in the Lafi 7 variety during the 1966-1970 period. In addition a maximum of 200 acres annually will be planted in other varieties. On a conservative projection about 900 acres will be planted in cocoa during the next five years. With proper care, the application of fertilizer in these new planting will cost about £9,000 annually by 1970. As far as bananas are concerned uncertainty exists with respect to the new acreage to be brought under cultivation. First of all efforts of the Department of Agriculture will be directed towards rehabilitation of existing plantations destroyed and damaged by the hurricane and the bunchy top disease.

According to the last World Food Program proposal new acreage under bananas would total about 2,000 acres in 1966. When the machinery for new banana development is established the same acreage could subsequently be planted annually until 1970. Consequently some 10,000 acres of banana plots will be available by 1970, using a considerable amount of fertilizer if instructions by the Department of Agriculture are followed. The Agriculture Department estimates the total requirement for fertilizer in this area at about £160,000. Actually, purchase of fertilizer from overseas could rise by some £180,000 by 1970 if all development schemes for cocoa, copra and bananas are implemented as scheduled by Government. The substantial rise of fertilizer application should be accompanied by a bigger growth of production per acre.

The last major components of imports of chemicals, comprises the drugs imported by Health Department and to a minor extent by the local firms. With the present state of medical care, the expansion of consumption of drugs will be related directly to the growth of the population and increase from £45,000 in 1966 to about £54,000 by 1970. After adding up the different growth trends of these sub-items of the group chemicals and allowing for minor increase in the remaining items, the estimated total imports of chemicals by 1970 equal some £330,000. As mentioned this rise in imports of chemicals is mainly on account of extensive use of fertilizers and a small saving through the introduction of locally produced soap.

The last group of imports consists of other manufactured goods, totalling some £581,831. Apart from certain investment goods, this group contains many appliances of a more luxurious nature. The extent to which the community can continue to buy these niceties depends very much on the successful completion of the aims set for development of agriculture and industrial activities. The degree of success is very uncertain and accordingly a very conservative estimate has been adopted. If allowance is made for a normal growth pattern of a number of items (books, stationery, food for animals etc.) imports of all other manufactured goods will grow by slightly over 1% per annum and equal about £630, 000 in 1970.

Table XXXV shows a summary of imports of different categories of commodities between 1962 and 1965 and a forecast of imports of the same in 1970. Information for past years is adapted from Customs reports.

TABLE XXXV

VALUE OF IMPORTS BY CATEGORIES (IN £ SAMOAN)

Group of Commodities	1962	1963	1964	1965	Percentage change 1966-1970	Projection for 1970
Foodstuffs	946,894	968,607	1,029,789	1,016,968	25	1,270,000
Alcoholic Beverages	29,863	53,645	47,429	70,827	40	100,000
Tobacco	97,531	125,135	106,067	94,657	16	110,000
Textiles	292,925	246,883	284,255	255,398	14	290,000
Machinery, equipment, tools	260,430	307,301	573,672	468,195	30	610,000
Transport equipment	119,856	194,614	284,172	148,523	8	160,000
Mineral Fuels	94,844	99,099	122,650	113,610	32	150,000
Chemicals	150,721	178,103	166,312	157,639	109	330,000
Raw Materials	418,733	356,604	454,071	382,700	- 8	350,000
Other Manufactured Goods	449,903	476,909	482,083	581,831	7	630,000
TOTAL:	2,861,700	3,006,900	3,540,500	3,290,348	21.5	4,000,000

Total imports are estimated to increase from almost £3.3million in 1965 to £4million by 1970. This moderate 4% growth annually, can only be allowed to take place if exports and invisible earnings develop accordingly. Among the group there is only one, raw materials, for which imports are expected to decline, due to the contemplated development of a timber industry during the next five years. Biggest growth of imports equalling 109% during the next five years is expected in the chemical sector, when plans to enrich the soil through application of large quantities of fertilizers are implemented as scheduled by the Department of Agriculture. The import of alcoholic beverages will expand by approximately 4% per annum. Any increase of this item is clearly a luxury and depends on the political climate in Western Samoa. From the economic point of view, this category should be one of the first on which cutbacks should be initiated if development of exports lag behind the plans. When growth patterns of different categories are compared, the peculiar position of foodstuffs is striking. The considerable increase in imports will lead to increasing opportunities for local substitute food processing and manufacturing operations.

Projection of the Balance of Payments

The estimate of the expected trade in 1970, shows a huge deficit equalling some £1,080,000. This deficit is based on an export projection of about £2,920,000 and a demand for imports totalling some £4,000,000. In achieving this result some assumption necessarily had to me made. As far as exports are concerned it is clear that output cannot be expanded at a faster rate, because the agricultural sector is in a very bad state. Production for export has to be built up from the start, with properly prepared development schemes and follow up by an upgraded extension service. In this respect, the role of banana plantings should be stressed. As this plant matures in a relatively short period of time, its exports can be of great assistance in assuring immediate and constantly growing receipts of overseas currency.

It is estimated that imports will grow by approximately 21.5% between 1965 and 1970. Increase of demand as a result of the population growth is one of major reasons for this growth. However much will depend on the expansion of purchasing power, which if exports of crops would be the only factor, gives no reason for optimism. Considerable imports are also needed for investment in development projects. These imports include: building and other materials for hotel development, machinery for new secondary industry and other small equipment.

One factor that should have a positive influence on the Balance of Trade in the future is the establishment of the food processing laboratory. One of the aims of the laboratory will be reasearch into the matter of substitution of presently imported canned goods. There are good prospects that replacement of these imports can be realized with a limited local investment. Estimates are for a reduction of these imported foodstuffs and net savings of some £200,000 with a similar decrease in the 1970 projection of imports of goods.

The establishment of an export industry for canned fish, meat, tropical packed products requires considerable investment, and depends on overseas investors for know-how as well as capital. The estimated deficit on the balance of Payments outlined below, makes it even more necessary to vigorously pursue these projects. If no success is achieved there is a risk that Balance of Payments deficits will continue to occur in the next five years.

Even with a favourable outcome in the food processing sector, Western Samoa cannot afford to run a trade deficit of this level in each consecutive year without finding compensation in other items. Some projects may be financed with an overseas loan. This automatically solves the problems of overseas currency for purchase of investment goods, though it creates a sizeable problem in the future when this loan has to be redeemed and the project in question does not show a profit. Furthermore, Western Samoa has to realize a substantial annual surplus on its invisible account in order to make ends meet. In the past, this has always been the case. Much will depend on the development of the travel sector and the willingness of Samoans living overseas to offer assistance to their relatives in Western Samoa. A significant boost of visitor receipts can only be brought about by a similar increase in hotel capacity, requiring big investment. Assuming the construction of 200 new rooms between now and 1970, Western Samoa can cater an additional 15,000 visitors annually or a total of 24,000 that are expected in 1970. Based on the projections of the Visitor Destination area study these visitors will spend some £700,000 annually. This addition will no doubt strengthen the Balance of Payments though about half of the Balance of Trade deficit remains to be made up by other invisibles. In view of the still growing number of Samoans living in New Zealand, Personal reeipts by relatives in Western Samoa will continue to grow. However, there is a limit to the financial capacity of these benefactors. In the past few years personal receipts have grown by about £145,000 annually and under the influence of assistance given to relatives after the recent hurricane, the first quater of 1966 seems to confirm this trend. A slowing down of these receipts is expected during the second half of the 1966-1970 period. Therefore the expansion of net personal receipts is estimated to increase at half the present rate of growth leading to a level about £360,000 above the 1965 total receipts. On the other hand, personal remittances will also increase though at a slower rate. Of course control is of vital importance to prevent excesses. The abovementioned two elements that are expected to influence the Balance of Payments for the better are both very sensitive. With the long term crops such as cocoa and copra coming in the fully productive stages, expansion of the visitor industry and secondary industry, a firm base for future development will be established.

Besides a number of Government transaction other invisible payments and receipts include remittances of earnings of firms. Since these figures were first published in 1962, a deficit has been recorded on this account. As can be expected, business interest of foreign companies in Western Samoa are considerably more extensive than those of Samoan residents overseas. If this trend persists, the deficit on this account could equal some £100,000 in 1970.

The obligations of Government have grown at a very fast rate during the last two years. Including the Agricultural Rehabilitation Loan, total outstanding debt equals some £1,325,000 with an average 5.3% interest rate. This constitutes a heavy burden on the Balance of Payments, especially since output is not expected to rise at the same rate before 1970. Moreover, these obligations are irrevocable. Short term savings initiated to overcome Balance of Payments difficulties will not be able to affect these payments and other solutions by adopting import restriction and increasing income from invisible transactions.

Western Samoa spends a substantial sum each year on payments of insurance premiums. This situation will persist in the next five years and a gradual expansion of this sector is projected. In 1965 the country spent about £60,000 on premiums, a rate of growth of almost 9% per annum. The introduction of new investments, including new construction and valuable machinery, together with the growth of life insurance business,will further boost local activities in this sector. Hence a 6% annual growth is certainly within the limits of development, implying payments of some £77,000 in 1970.

In addition to all elements already considered in the preceding paragraphs, the Balance of Payments contains a few other items of minor importance. Expenditures by and payments to religious institutions forms one group which has been liable to strong fluctuations during the last few years. Investments are being reduced by one of the missions which has made substantial investments in the past. At the same time many church organizations in Western Samoa are extending their activities overseas. After favourable effect in the past, the receipts and remittances are slowly moving towards a deficit position though it will be some time before this occurs. These projections will assume a gradual decline of the net positive balance from some £55,000 in 1965 to about £30,000 in 1970. The last figure brings these remittances back to the stable level before growth commenced.

In addition to visitor income there are also travel expenditures by Samoans travelling overseas. Travel payments were approximately £52,000 in 1965. In spite of the restrictions on travel to American Samoa there seems to be no end to the expansion of this item as more Samoans find a way to visit their relatives or make other trips. The next few years will almost certainly witness a significant expansion of travel to an estimated £100,000 in 1970.

The cost of film hire is not expected to change very much, as the same intensive use will be made of the existing movie house. Hence an expenditure of some £3,000 will be needed in 1970

The last item pertains to the maintenance of the New Zealand High Commission in Apia. The financial needs of this representatives' office have varied between 1962 and 1965 and averaged some

£60,000 annually during this period. It is assumed that these remittances will remain the same during the next five year planning period. Table XXXVI shows a summary of projections made for imports, exports and items on the invisible account of the Balance of Payments of Western Samoa in 1970.

TABLE XXXVI

PROJECTIONS OF THE BALANCE OF PAYMENTS IN 1970

Total Imports of Goods	4,000,000
Earnings of Overseas Firms	250,000
Personal Remittances	400,000
Payments by Religious Institutions	30,000
Expenditures for Travel	100,000
Interest, dividends, royalties and commissions	140,000
Insurance	77,000
Film Hire	3,000
Sub-total Other Payments	1,000,000
Total Payments	5,000,000
Total Exports of Goods	2,920,000
Earnings of Samoan Firms	150,000
Personal Receipts	1,100,000
Expenditures by Religious Institutions	60,000
Income from Travel	700,000
New Zealand High Commission	60,000
Sub-total Other Receipts	2,070,000
Total Receipts	4,990,000
Balance of Trade	- 1,080,000
Balance of Payments	- 10,000

It would be a great surprise indeed if the Balance of Payments did not show a deficit in 1970. The one factor that could change this position is the price level of Samoa's export crops. In this projection constant prices have been assumed because the past period has mainly been characterised by sharp fluctuations of the export prices for copra and cocoa and a constancy in the contracted sales prices for bananas. The relatively small deficit on the Balance of Payments is based on the assumption of very high receipts both from visitor industry and relatives living overseas. In the first case the realization of the projected total receipts, equalling some £700,000 depends on the realization of the contemplated construction of new hotel rooms and the success of promotional campaigns. If the visitor industry is not developed as planned then there will be a substantial deficit on the balance of payments. Some uncertainty also exists with respect to the benefits from the timber industry. This projection takes into consideration at least a basic development of the potential of this industry. Even if the large-scale Savai‘i venture is deferred for the next five years because no agreement can be reached, other small projects promise to make up for this deletion. A last factor, of major importance for the strengthening of the Balance of Payments was already mentioned in the breakdown above and concerns the remittances of Samoans living in New Zealand to their relatives in Western Samoa. Although these remittances will rise during the next five years, the rate of increase is expected to be lower. Nevertheless, personal receipts from overseas are an indispensible element to balance the overseas accounts and failure to ensure this flow from New Zealand will have serious consequences.

A conclusion from these projections is that if Western Samoa fails to dramatically increase its returns from exports of crops, the role to be played by invisibles may be too heavy. If the rate of increase of invisibles lags behind, i.e. if receipts from visitors do not come up to expectations, a serious squeeze on imports of goods will develop. At the present moment the large unfavourable balance of trade has led to pressure on the value of Samoan currency. The 1966 hurricane aggravated the situation and led to sharp import restrictions. With the large and continuing trade deficit such measures would eventually have been necessary even had there been no hurricane.

In order to balance its payments position by 1970, it is clear that an all out effort is necessary in basic agricultural development as well as in the development of the visitor industry. Timber resources must be commercially utilized and secondary industry encouraged. At the same time government must keep a close control over imports and more of the nations income must be directed toward development as opposed to consumption.

Section IX

Projection of Government Revenues and Maintenance Expenditures

Ordinary Revenue

The available statistical evidence points to a trend for considerable growth of ordinary government revenue, defined as total revenues by government from taxes, fees, rents, sales and services rendered. Table XXXVII shows the growth pattern of ordinary revenues from 1961 through 1966.

TABLE XXXVII

DEVELOPMENT OF ORDINARY REVENUES: 1961-1966

Year	Ordinary Revenue £.000	Increase in % over previous year
1961	1,473.7	
1962	1,681.6	14.1
1963	1,947.8	15.8
1964	2,045.9	5.0
1965	2,230.2	9.0
1966	2,355.0	5.6
	AVERAGE	9.9

Ordinary revenues increased from £1,473,700 in 1961 to an estimated £2,355,000 in the 1966 budget. This growth of almost £.9million in five years' time, implies an average growth rate of about 9.9 percent per year. Annual increase varied between 5 percent in 1963/1964 and 15.8 percent in 1962/1963. For 1966 a growth of 5.6 percent compared with 1965 total ordinary revenue is contemplated.

During this period some changes in the relative importance of separate items of revenue have been realized. Table XXXVIII (p. 73) lists the development of main items between 1961 and 1965.

The revenue structure of Western Samoa gives a prominent place to export and import duties. In 1961 these items equalled £761,900 compared with total revenues of £1,473,700 while in 1965 the relation was £1,115,300 against a total ordinary budget revenue of £2,230,200. The relative position of import and export duties has declined slightly but still accounts for almost 50 percent of ordinary revenue. The change in position has mainly been brought about by the disappointing results of cocoa exports leading to a subsequent decrease in export duties from cocoa. Import duties (including primage) constitute the bulk of ordinary revenue with an estimated total of £800,000 in 1966. In spite of the decline in total value of imported commercial goods, import duties (including primage) have shown a 65% increase since 1961. New import duty rates have certainly had a substantial influence.

In comparison with revenue from import duty, the revenue from income tax is estimated to equal a mere £200,000 in 1966. For unknown reasons, income tax revenue in 1962 was very low and equalled only £106,600. Since then development of revenue has improved to an overall estimated increase of 45% for the 1961-1966 period. Still, the relative importance of income tax is small, especially so if a comparison with developed countries is made. Revenues from liquor increased from £106,000 in 1961 to an expected £180,000 in 1966.

As indicated in the last column of Table XXXVIII some minor items of government revenue are expected to realize substantial gains. Revenue from wharfage has been almost constant

Table XXXVIII

DEVELOPMENT OF MAIN ITEMS (a) OF GOVERNMENT ORDINARY REVENUES 1961-1966 (£000)

	1961	1962	1963	1964	1965	1966 (Budget)	% Change 1961-1966
Export duty: Bananas	28.0	38.1	34.4	32.4	24.1	7.0	-75
cocoa	71.0	122.5	84.7	72.4	38.3	35.0	-51
copra	75.3	63.7	87·1	91.0	84.3	80.0	6
Import duty	587.6	689.9	752.9	796.7	800.9	740.0	26
Primage (b)					167.7	150.0	(51)
Sale of liquor	106.0	124.6	139.9	163.1	185.5	180.0	70
Income tax	138.1	106.6	150.9	169·1	225.2	200.0	45
Shipping, port duties, wharfage and pilotage	17.2	28.3	22.9	27.2	25.3	40·5	135
Postal revenue	16.7	35.5	24.5	32.7	30·1	33.5	100
Power sales	48.1	55.8	63.3	59.7	59.5	105.6	160
Sale of stores	151·4	123.2	136.8	136.3	128.2	160.0	6

(a) Main items include all items exceeding £30,000 in 1966; a number of fully recoverable Public Works items have been excluded.

(b) The percentage change 1961-1966 for primage shown between brackets indicates the percentage change of import duty in 1961 relative to import duty plus primage in 1966

for four years, but should be boosted in 1966 with new rates for the new wharf to an annual total of £40,500.

Postal revenue will rise from only £16,700 in 1961 to an expected £33,500 in 1966. The improvement of overseas mail connections and the issue of new stamps for stamp collectors push revenues up. Power sales are projected to grow from £48,100 in 1961 to £105,600 in 1966. However, actual power sales in 1965 were significantly below estimated sales.

Sale of stores is a major fully recoverable item of government expenditure and has been included to show its surprising decline between 1961 and 1966. The growth of other revenues (not shown in Table XXXVIII) is mainly fully recoverable services such as General Services and Workshops.

Actually this is only of administrative importance and has no real influence, because the same amount is shown both for expenditure and revenue.

Export Revenue

The development of government revenue is closely linked to the success of the economy of Western Samoa. Basically, the economy is an agricultural one and a failure to increase the value of agricultural exports will undoubtedly have a direct adverse effect on revenues from export duties. However, the rest of the economy also relies on the climate in the agricultural sector so that these revenue items will be effected with a short time lag. The propensity to import depends on the extent to which overseas currency is earned through exports of goods and other remittances from overseas. In the end the development of government revenue will depend on the fortunes of the agricultural sector and new investments in industry and exogeneous factors like personal receipts from relatives in New Zealand. Unfortunately, adequate information on the growth of some of these factors and the extent of their relation with items of government revenues is not known. Some assumptions will be introduced to illustrate the working of this concept.

As far as revenues from export duty on banana shipments are concerned, 1965 was an extremely bad year, with £24,100 of revenue only. During the next 2 years a decrease must be expected, because some time is needed to eradicate the consequences of the bunchy top disease and rehabilitate plantations from hurricane damage. With the initiation of special planting schemes, a significant growth of production is expected by 1970. Accordingly, exports of bananas are estimated to total some 560,000 acres contributing some £28,000 to total revenues by 1970. With cocoa development has been very similar. Exports fell by over 30% between 1964 and 1965. At the same time production decreased to about, 3,700 tons in 1965. Although price considerations constitute part of the explanation for this decline, it is possible that adverse crop conditions also played a role. Between 1966 and 1970 a recovery is expected in view of the new plantings in the scope of the plan. With an estimated production of 4,700 tons for exports in 1970, allowances are made for an additional 300 acres to be in the productive stage. Based on an average price of £165 f.o.b. per ton export returns total £775,000 with an expected government revenue of £62,000. As most of the cocoa will be sold for prices below £200 per ton (in particular this applies to second grade and nibs) revenues are between 5 and 10% of total exported value of the cocoa.

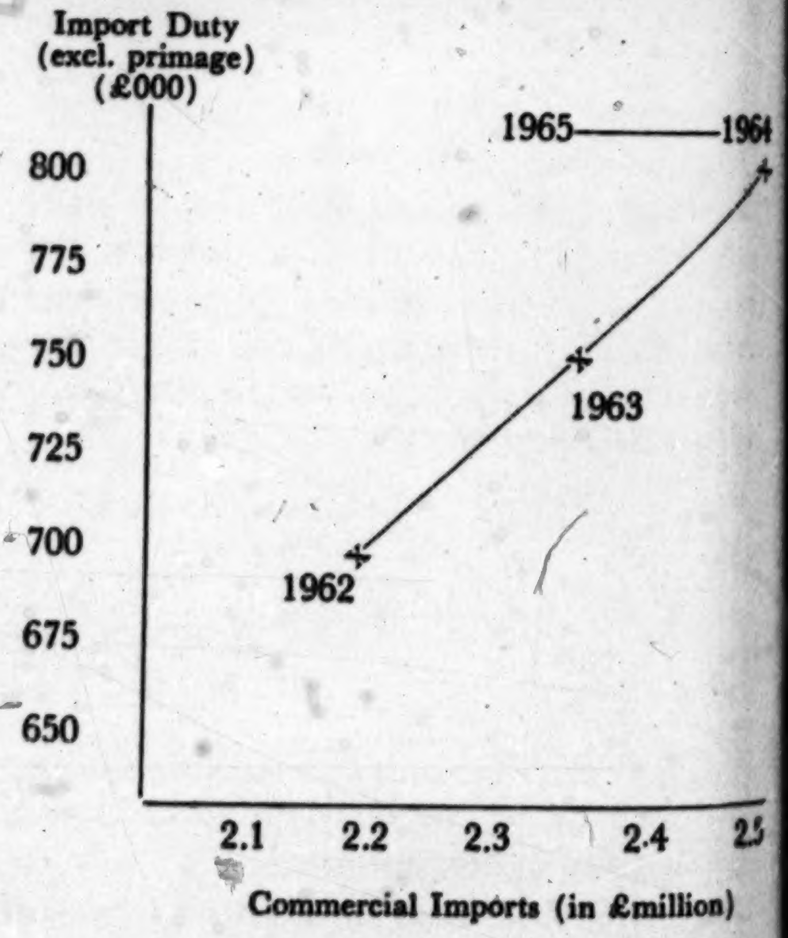
Copra exports were equal to only 12,370 tons in 1965, for a value of £839,000 and an average price of almost £72 f.o.b. Since 1960 production has been low, with the exception of 1964, when 15,300 tons were exported. New plantings have been insignificant during earlier years of the sixties and fruits from the economic plan replanting scheme now getting under way cannot be expected before 1970. An exception should be made for some large-scale plantations that have applied a systematic planting scheme and do expect better results. On the other hand local consumption will increase considerably as more Samoans reach mature age levels. Presumably all these conflicting factors add up to a very slow increase of production for export and in the projection no more than 14,600 tons at £65 per ton f.o.b. is allowed for in 1970. Accordingly, export duties from copra will be around £95,000 in 1970. Total export duties from the three main crops are estimated at £185,000 in 1970 against £146,700 in 1965, an average annual increase of almost 5% between 1966 and 1970. As pointed out already total revenues will be fairly static during the first part of this period, while the bulk of the improvement will be realized during the last years of the Economic Plan.

Import Revenue

Total imports as reported by Customs Department include a considerable amount of imported goods, such as imports for government and educational purposes, on which no import duties are levied. An attempt was made to exclude these items from total imports and relate the balance to import duties in each consecutive year between 1962 and 1965. In figure II the series are plotted in a diagram.

Figure II

THE RELATION BETWEEN THE LEVEL OF COMMERCIAL IMPORTS AND REVENUES FROM IMPORT DUTIES: WESTERN SAMOA



A linear relation exists for 1962-1964. In 1965 the situation is different because the tariffs were modified. Accordingly, this observation lies above the straight linear relationship. The additional revenue from primage duty (£167,700) provides for a simple vertical lift in the diagram. After allowance is made for the overall increase in tariffs, the linear relation between commercial imports and revenues from import duties can be projected for higher values of imports. The angle of the new relation is still the same, because it is assumed that a steeper curve than previously experienced will not occur with a shift in composition of imports towards lower duty rates. Change in imports of commercial goods was equal to 10%, 6% and 2% annually between 1962 and 1965. The decrease in 1965 is to be explained by the restrictions on imports imposed by Government. The same is true for 1966. As shown in the section on import projections, total imports of goods are estimated to total some £4million. Persumably, about £900,000 worth of goods will be imported by government or are exempt of import duties. Consequently, it seems that imports of commercial goods will equal some £3.1 million by 1970. If the present relation between value of imports and revenues is assumed to be applicable for the coming period, it is quite conceivable that total revenues will equal about £1·265 million.

With the present system of taxation, the bulk of government revenues is obtained from import duty and primage. The above projections indicate an interesting characteristic of the revenues namely, that they lag behind the growth of imports.

Income Tax

Between 1961 and 1965 revenues from income tax have shown a haphazard pattern, with a tendency for a leap forward in one year, eliminated by slow or negative change in the next year.

After a decline in revenues between 1961 and 1962, due to a contraction of trade in 1961, revenue recovered to above its previous level. Total actual revenues in 1965, amounting to £225,200, do not only reflect the favourable climate for business in 1964, they received an appreciable boost from an intensification of the search for revenues, including taxes paid retrospectively. Therefore, care should be taken not to use 1965 as a starting point for a 1966-1970 projection, because revenue in 1965 has been inflated by exceptional factors. Income tax in Western Samoa depends directly on income earned in a previous year and this again depends heavily on the direct and indirect effect of returns from exports. No significant increase of exports is expected during the two initial years of the five year Economic Plan. During the second half of the planning period considerable improvement is expected, because of new investments and the expected maturation of some of the long term crops planted during the beginning of this period. Consequently, total export of Samoan produce is estimated at £2.9 million by 1970, a growth of almost 40% on the 1965 figures. However, returns from exports are only one of several determining factors for income tax revenues and statistical information indicates that because of other factors and residual disturbances the relation is surprisingly weak or at least inelastic. For example, in spite of decreasing export returns between 1962 and 1964 income tax revenue has grown during that period. An explanation is presumably offered by the distribution of income tax revenue. This shows that revenue depends mainly on the profits of a small number of big firms, while revenues from personal income tax account for only 25% of total revenue in this category. These firms relate their sales to total purchasing power, including both export returns and income obtained from overseas. Since Personal Receipts from overseas have been significant during the past three years, disposable income has undergone an appreciable boost. Both factors imply an important boost in expected revenue from income tax, though the extent of this increase is difficult to assess with reasonable accuracy. On the basis of:

(a) the growth of personal receipts, outlined in the section on Balance of Payments;
(b) an improvement of exports of goods to the 1962 level;
(c) the accompanying multiplier effect on other sectors of the Samoan economy; and
(d) the implications of a progressive income tax system, plus its enforcement, a growth of about 6% annually seems possible.

Therefore, Revenue equalling £240,000 is contemplated in 1970 and included in the estimate of total Government revenues for that year.

Liquor Revenue

Sale of liquor has grown to a major activity of Government that adds substantially to total government revenue. Sales increased from £106,000 in 1961 to £185,500 in 1965 an average of 12.5% annually. It seems that the increase in prices in 1965 has been more than compensated by the easier access to the purchase of liquor in that year. Basically, consumption of liquor in Western Samoa is low, with less than 1 gallon per capita per year. In many countries of the world consumption is very substantial. There is considerable room for an increase in per capita consumption. Several factors will contribute to the growth of consumption. A significant shift in the age distribution of Western Samoa, with a big increase in the number of people in those age groups in which drinking habits are strongly implanted, will take place. If a gradual increase in the personal income of the country is realized, a growing share of the average household budget will be spent on luxuries, among which liquor takes a prominent place. In the section on projections of imports, the increase of liquor import was estimated to equal about 7% annually during the five year planning period. If sales prices remain constant, total liquor sales will grow at the same rate and equal some £260,000 in 1970.

Postal Revenue

Postal revenue constitutes only a minor revenue, though its importance has risen during the 1961-1965 period. In 1965 total postal revenues equalled some £30,100 well above the £16,700 earned in 1961. On the whole, the development of postal revenue has been haphazard and no regular pattern exists. E.g. a substantial increase in 1962 was almost eliminated in 1963. Two factors determine the growth of postal revenue. They are: (1) regular sales to the general public; (2) special sales of new issues to collectors. Regular sales increase, depending on the growth of the population and the development of exchange of letters with overseas. Most of the correspondence is with relatives in New Zealand. In 1965 the number of Samoans in New Zealand increased by more than 600; or about 7% from migration alone, offering new opportunities for exchange of letters. All these factors add up to an annual increase greater than the population growth and some 5% has been assumed. The growth prospects of the other part of postal revenue is more difficult to assess. Much will depend on the number of new issues and the interest shown by overseas collectors. Efforts to develop this market will continue. Stamps are one of very few "products" for which Western Samoa is in a favourable trading position, because of its smallness and its remote geographical position. At present revenues amount to roughly £3,000 for each new issue, though this may rise with more publicity given to new stamp issues. Accordingly, an overall expansion may be expected between 1965 and 1970, with postal revenues totalling £60,000 by 1970.

Power Sales

The growth in power sales has been from £48,100 in 1961 to approximately £59,500 in 1965. The percentage increase has been greater during the first half of the period than during the latter half because from that moment on sales to Government Departments were excluded from the revenue figures. Government is an important consumer and accounts for almost one-quarter to one-fifth of total sales. Since the beginning of 1966, Government consumption is again measured and Departments will be required to pay for power service.

It must be expected that development of power consumption is not so much linked to the growth of the population in the whole of Western Samoa, as to the urbanization of Apia. It can safely be assumed that the growth of Apia exceeds 10 per cent per year, a figure comparable with the growth of cities in other developing countries. Moreover, people shift from Samoan fales into European type houses, with a consequent boost in consumption. New investments, such as the soap factory, the bottling company and the ice cream factory will increase the number of big consumers. All these factors add up to an average increase in power sales of at least 15% per year, a rate which was adopted by the Electric Power Scheme in preparing estimates for future capacity needed. This compares with a substantially higher recorded rate in some of the other Pacific Island Territories. Government has now eliminated the 25% dicount for quick payment of bills. Keeping these changes in mind and assuming physical sales will double in five years' time, the expected revenue may reach £200,000 in 1970.

Wharfage and Related Revenue

Since they cover charges levied for a group of similar government services, shipping and port dues, wharfage and pilotage are considered together. Between 1961 and 1962 a big increase in these revenue items was realized and they rose from £17,200 to £28,300. Since then revenue has slowly declined, presumably, because rates were not increased and total trade slightly contracted between 1962 and 1965. The determining factor for the future development of these charges is the growth in total trade and the extent to which Government desires to balance revenues with operating costs of the new wharves and amortization of the capital loans. Tentative estimates indicate that operating costs of both wharves will equal approximately £25,000 by 1970. Total amortization based on 50 years estimated life and 5¼% interest rate, equals about £70,000 annually. Allowing for a degree of uncertainty with respect to value of the wharves and operating costs, total expenditures will be almost £100,000 in 1970. As the wharf is supposed to earn enough revenue to cover total expenditures, these revenues should equal some £100,00 by 1970.

Recoverable Service Revenues

The fully recoverable service items are mainly found under the Public Works Vote. They consist of payments by the general public and other Departments for a number of services. Services include municipal services for Apia and the transport pool. An example of the growth prospects is found in the expected increase in revenue in 1966 compared with 1965, equalling £104,800 or almost 50%. However, it should be mentioned that this result is partly due to earnings from a lease of the government dredge. As the name indicates these expenditures are fully recoverable, though results for each consecutive year show a persistent tendency towards a deficit. Some expenditures, like the transport pool are fully reflected in Departmental Votes. Hence, general revenue of the Government has to grow relative to services provided. The general public will certainly resist a sharp increase in charges even though services offered are steadily increased. If a return at a growth rate of 10% per year is assumed in the long run, total revenues for this item are estimated to equal £340,000 by 1970.

Mscellaneous Revenues

All other revenue items equal £376,200 in 1965. A breakdown into some categories is shown below:

Revenue from services rendered	£67,500
Revenue from social and educational services	29,600
Other revenue	150,900
Stores	128,200
	£376,200

Services rendered include small postal and radio services, audit fees and many other small items. Revenues from social and educational services are defined as revenues by Health and Education Departments, e.g. dispensary sales and school fees. Other revenues include a number of widely different items such as interest receipts, prison produce sales and general registry fees. In the coming years the percentage growth in revenues from services will probably exceed the rate of populaton increase, as new facilities are developed and people become aware of existing ones. Moreover, the urbanization of Apia will no doubt increase demands for some categories of services. Accordingly, a growth of at least 6% annually is estimated. This implies revenues from other services rendered, totalling about £90,000 by 1970. Revenues from social services rely heavily on the means applied to collect the debts. Especially in the field of Health services many people do not bother to pay for their stay in the hospital and for the drugs provided by the dispensary. As far as education is concerned, the system of school fees collection is weak. If a strong collection system is instituted a considerable increase can be achieved. Optimistically, revenues can easily be doubled and this estimate, £60,000, is used for 1970, to serve as an incentive for future policy. Other revenue consists of a mixture of a great number of smaller items. Some of these such as interest receipts on reserves, may actually decline between now and 1970. Others have been constant for several years. An overall insignificant change in this item is expected at an arbitrary 2% per year. Hence other revenue is estimated at £170,000 in 1970.

Stores is a fully recoverable item and consists of revenue from Departments for sales of stores. These fully recoverable expenditures declined between 1961 and 1966. According to the 1966 Estimates, revenues will be constant compared with 1965 Estimates, equalling £160,000. In view of the critical position of Government finance, this item should be kept down as much as possible. It is assumed that actual revenues in 1970 return to their approved 1966 level, because with the extension of Government services it is not conceivable that the preceding decline will continue. On the basis of the above estimates all other revenues will rise from a total of £376,200 in 1965 to an expected £480,000 in 1970, an overall increase of 4½% annually.

Grants

Since Independence, Western Samoa has received grants from a numbers of sources. Table XXXIX shows the primary sources for such grants.

TABLE XXXIX

GRANTS RECEIVED 1962 AND 1965 (IN £)[a)]

Source	1962	1963	1964	1965	1966 (est)
W.S.T.E.C.	10,000	15,000	65,000	25,000	10,000
Marketing Division	5,100	8,600	4,100	20,000	40,000
New Zealand	27,500	54,100	69,700	65,000	62,100
Copra Board					17,900
	£42,600	£77,700	£138,800	£110,000	£130,000

a) With the exception of 1966, these figures are based on cash receipts.
For 1966 the pledge is used.

Grants recieved by Government are exclusively used as part of the maintenance cost of Government Departments. Total grants have risen from only £42,600 in 1962 to a pledge of £130,000 in 1966. From New Zealand substantial additional grants not entered in Government accounts are received for educational purposes. During 1966 emergency grants in aid were made by Australia, the United States of America and New Zealand which are also not shown as they are for hurricane relief only. Grants from the Western Samoa Trust Estates Corporation vary according to the fortunes of this company. As new cocoa, copra and coffee plantings are gradually coming into the productive stage, and with an expansion of the cattle herd, grants will no doubt exceed those in past years. For the purposes of this projection it is assumed that grants will exceed the average £25,000 during the last five year period. Grants are estimated to equal an arbitrary £40,000 by 1970. Funds from the Marketing Division are now being used for the specific purpose of eradication of the bunchy top disease in Western Samoa. Presumably, grants from Marketing Division will decline to an arbitrary level of £10,000 in 1970. Inevitably, New Zealand Administrative Aid will decline between 1966 and 1970 with the replacement of seconded officers by local manpower. It is already evident that assistance is shifted towards project aid. Beyond 1968 no arrangements for New Zealand assistance have been made. However, it is assumed here that the level of assistance will remain constant. Accordingly, total grants from New Zealand are estimated at an arbitrary £60,000 in 1970. If the coconut replanting scheme is successful, the Copra Board is expected to continue its support of this project. Hence some £20,000 is contemplated as grant in 1970.

The total estimated grant in 1970 equals £130,000. It should be pointed out that the error in this figure may be substantial in view of the combination of uncertainties involved in the projection of grants. Furthermore, additional bilateral and multi-lateral aid may be received from other sources after presentation of the 1966-1970 Plan to other governments.

Summary of Projected Revenue

In the previous paragraphs projections for a number of separate revenue items were outlined. In Table XL a summary of all 1970 estimates is shown together with the actual 1965 revenues.

TABLE XL

PROJECTION OF GOVERNMENT REVENUES, 1965-1970

Revenue Item	1970	1965
Export duties	£185,000	£146,700
Import duties	1,042,000	800,900
Primage	233,000	167,700
Income tax	240,000	225,500
Sales of liquor	260,000	185,500
Postal revenue	60,000	30,100
Power sales	200,000	59,500
Shipping and port dues,, wharfage, pilotage	100,000	25,300
Fully recoverable service items	340,000	212,800
Other revenue	480,000	376,200
TOTAL REVENUE:	3,140,000	2,230,200
GRANTS:	130,000	110,000
TOTAL REVENUE AND GRANTS:	£3,270,000	£2,340,200

The projection of Government revenue in 1970, summarized in Table XL indicates an expected total revenue equalling £3,140,000 in 1970. This compares with actual Government revenue totalling £2,230,200 in 1965, and amounts to a contemplated 7% average growth per year during the five year planning period.

Growth of Government Maintenance Expenditures

The Pattern of Growth Between 1961 and 1965

Since Western Samoa doe not have any significant reserves, it can ill afford to run a deficit on the budget. This means a departure from earlier practice, because in the early sixties a deficit was budgeted for almost every year. Due to underspending of Government, the actual annual deficits were slight, though still decreasing total reserves by £236,779 between 1961 and 1965. Accordingly, total invested reserves equalled some £381,755 at the beginning of 1966. It is expected that the 1966 deficit will equal about £220,000, leaving very little to draw from in case of another emergency. The slow expansion of Government revenues during the first half of the 1966-1970 period requires a great degree of discipline from Government Departments in planning expenditure for their respective activities. In the past, maintenance expenditures of some departments have grown at a high rate. This is illustrated in TABLE XLI.

TABLE XLI

MAINTENANCE EXPENDITURES OF SELECTED DEPARTMENTS 1961-1965 (£000)

Department	1961	1962	1963	1964	1965	Average annual % change
Agriculture	100.1	94.6	96.6	110.5	131·2	7.0%
Education	262.9	290.0	327·1	353.3	401.0	11.1%
Health	251·9	247.0	250.2	250.1	275.8	2.3%
Public Works	173.7	211.0	400.8	370.2	334.7	17.8%
General Administration a)	628.6	551.9	665.7	713.6	802.4	6.3%
Other b)	101.1	126.1	139.0	138.4	158.9	12.0%
TOTAL:	1,518.3	1,520.6	1,879.4	1,936.1	2,104.0	8.5%

a) General Administration includes all Departments not classified under any of the other headings and Statutory Maintenance Expenditures. Accordingly it includes payments of interest totalling some £14,800 in 1964 and £78,300 in 1965.

b) Other includes all other Departments that have a service or trading fucntion.

Between 1961 and 1965 total maintenance expenditures increased by about 8.5% annually. The most important single item among Government expenditures are expenditures for education. These increased from only £262,900 in 1961 to some £401,000 in 1965, an average growth of 11.1% annually. In addition to the effects of the population growth leading to an expansion of the number of pupils in schools, total maintenance expenditures have been boosted by a significant increase in the outlay per employee. These increased from £340 in 1962 to an estimated £461 in 1965. The growth of education expenditures has been primarily for the upgrading of teachers' salaries which are still low.

Maintenance expenditures for health, another item which is bound to expand as a result of the high birthrate in Western Samoa, did not show the expected growth during the beginning of this decade. From some £251,900 in 1961 these expenditures increased to £275,800 in 1965, an average 2.3% annual increase.

If payments of interest on the Harbour Loans are discounted, the maintenance expenditures of the General Administrative apparatus of Government were very effectively kept down, and expanded by only 3.6% annually from £628,600 in 1961 to some £724,100 in 1965.

Total maintenance expenditures of service and trading departments grew from £101,100 in 1961 to some £158,900 in 1965. A change in the system of accounting explains part of the growth, though the bulk is due to a considerable extension of services and increase of wage levels.

As far as agriculture is concerned, there has been a determined effort to extend the services of this department. Since qualified officers are scarce, this action has only now gathered momentum with the return of officers from overseas studies. Consequently, the increase of expenditures between 1961 and 1965 totalling £31,100 or7% annually has mainly been realised during 1964 and 1965.

Projected Maintenance Expenditures in 1970

The projection of total Government revenue indicates the possible availability of funds totalling some £3·27million in 1970. These funds serve to finance both the maintenance expenditures and capital and development expenditures of Government. As far as development expenditures are concerned, a target estimate of £200,000 annually has been set by government. An allowance is made here for an additional £50,000, to be spent depending on the successful completion of the programme. Other capital expenditures include only a number of outlays for small repairs or additions to existing structures or equipment. The 1966 experience shows that these items can be kept below the £100,000 level. Accordingly, some £2,92million is projected to be available for maintenance activities of government in 1970.

Various conditions have to be fulfilled in order to ensure that total maintenance expenditures do not exceed the planned level. The best approach would include the setting of targets for separate Departments or groups of Departments, keeping in mind their individual requirements during the five year period. Some Departments, like Agriculture, are expected to considerably extend their activities. Most of the agricultural development projects require a follow up by extension services. At the same time expenditures on the education of officers for these services will rise. For example, maintenance expenditures for Alafua College will increase considerably. Therefore, total maintenance expenditures in Agriculture are assumed to double during the five year period and will total some £260,000 in 1970.

The growth of education expenditures is closely linked to the number of pupils entering primary schools and the establishment of new opportunities for advanced education. E.g. attempts are being made to improve the teachers training college. Generally speaking, Government has adopted a policy of special emphasis on secondary education. Inevitably, salaries of teachers will rise with an improvement in their qualifications. Consequently, maintenance expenditures are expected to increase at a higher rate than the increase of the number of pupils in schools. Nevertheless, the level of total maintenance expenditures of Government and the needs of other Departments are such, that care should be taken not to increase maintenance expenditures by more than an average 7% annually between 1966 and 1970. If this target is achieved, maintenance expenditure of Education Department will equal some £565,000 in 1970.

Between 1961 and 1965 the growth of Health expenditures was very small. Somehow the new needs brought about by the high rate of increase of the population were compensated by the excellent health conditions in Western Samoa. However, overcrowding at the local hospital shows that urgent action is needed to improve some of the services offered. Moreover, the Island of Savai'i requires a general hospital of its own with fully qualified doctors and nurses. The experience of 1965 has already shown that a significant growth of health expenditures has to be reckoned with during the 1966-1970 period. It is assumed that Health maintenance expenditures will grow at the same rate as education expenditures. Hence these expenditures are estimated to equal some £370,000 in 1970.

In the sub-section on government revenues, it was pointed out that revenues from fully recoverable activitities of Public Works Department were expected to rise at an average rate of 10% per annum. Consequently, this part of Public Works activities needs no further consideration here. Other Public Works expenditures will certainly rise between 1966 and 1970. E.g. some roads are in such poor condition that intensified care is badly needed; maintenance of houses and other installations will be more expensive, as a result of new construction during the first half of the sixties. Total maintenance expenditures for Public Works are estimated to reach some £500,000 in 1970, complying an average 8.5% rate of annual growth during the 1966-1970 planning period.

Maintenance Expenditures for General Administration can be split up into statutory interest and sinking fund payments for the Harbour Loans and the regular Departmental outlays. The former are known to total about £90,000 in 1970. The existing governmental organization is able to care for a much larger population and the target increase should be reserved for those occasions when new organisations or functions are established. Consequently, this part of expenditures is expected to grow by only 20% during the whole period, leading to maintenance expenditures equalling some £975,000 in 1970.

Electric Power Scheme accounts for almost half of the maintenance expenditures of service and trading Departments. These activities are expending at a fast rate and as already outlined in the subsection on revenues, this rate of increase is expected to persist. Maintenance expenditures will grow at approximately the same rate, because the expanded installation is to a lesser degree made up of hydro machines. Other service functions will presumably be enlarged relative to the needs of a growing population. This projection assumes an increase of maintenance expenditures to some £250,000 in 1970. In this way a growth rate of about 10% per annum is maintained.

Summary Projection of 1970 Maintenance Expenditures

A breakdown of 1970 target projections for maintenance expenditures of different Departments and groups of Departments is shown in Table XLII.

TABLE XLII
Target Projections of Government Maintenance Expenditures—1970

Agriculture	£260,000
Education	565,000
Health	370,000
Public Works	500,000
General Administration	975,000
Other	250,000
TOTAL:	£2,920,000

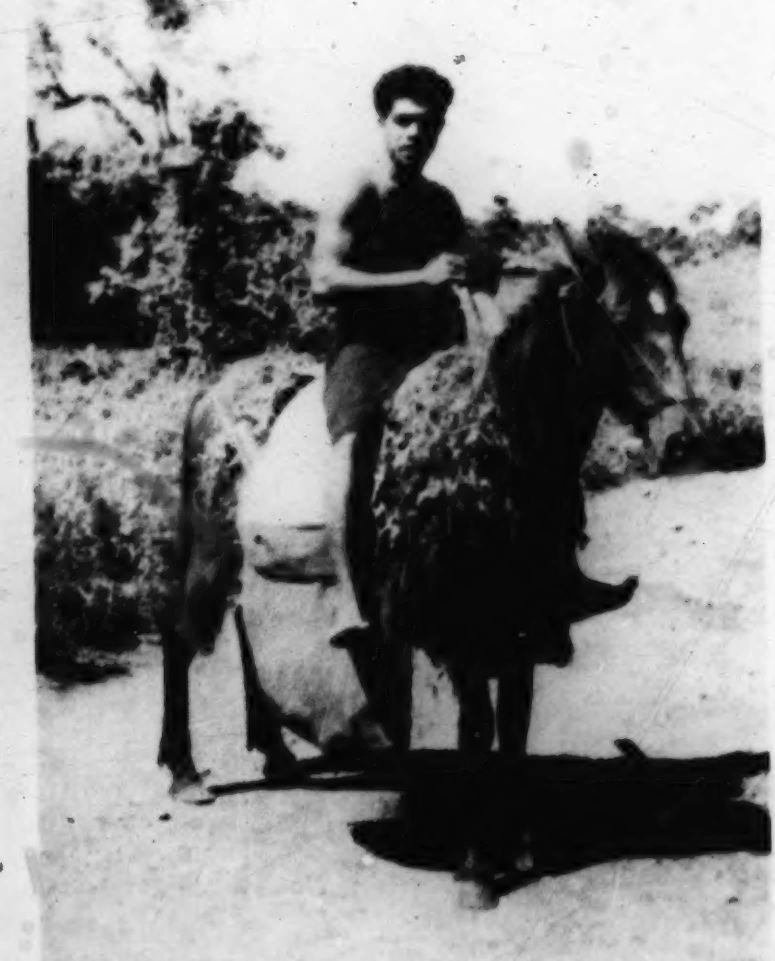
In compliance with the funds estimated to be available for Government Maintenance Expenditures, the target projections for this part of total Government Expenditures has been set at £2,920,000. With two exceptions, the relative position of each Department will be unchanged in 1970. Firstly, since Government has decided to put special emphasis on the development of agricultural services, maintenance expenditures of this Department are expected to take a more prominent place in the future. Secondly, maintenance expenditures of service and trading Departments will receive a disproportionate boost from the expected increase of power consumption.

In view of the contemplated pattern of growth of Government Revenues, some caution is needed. As outlined, the bulk of this increase is expected during the second half of the 1966-1970. Hence maintenance expenditures should show a substantially lower rate of increase during the beginning of the next five years, than over the total period.

The projected maintenance expenditures of £2,920,000 and the projected revenues of £3,140,000 leaves only £220,000 for maintenance capital and development capital expenditures. It was pointed out that in 1965 two-thirds of all overseas income was spent on government maintenance expenditures. Short of some hard political decisions being made, the same trend toward a disproportionate share of the nation's revenues on maintenance expenditures will continue. Further, the practice in the past has been that whenever there has been a fall in revenues from an emergency, falling world prices, etc., development estimates have been the first to suffer and have taken the largest proportional cuts.

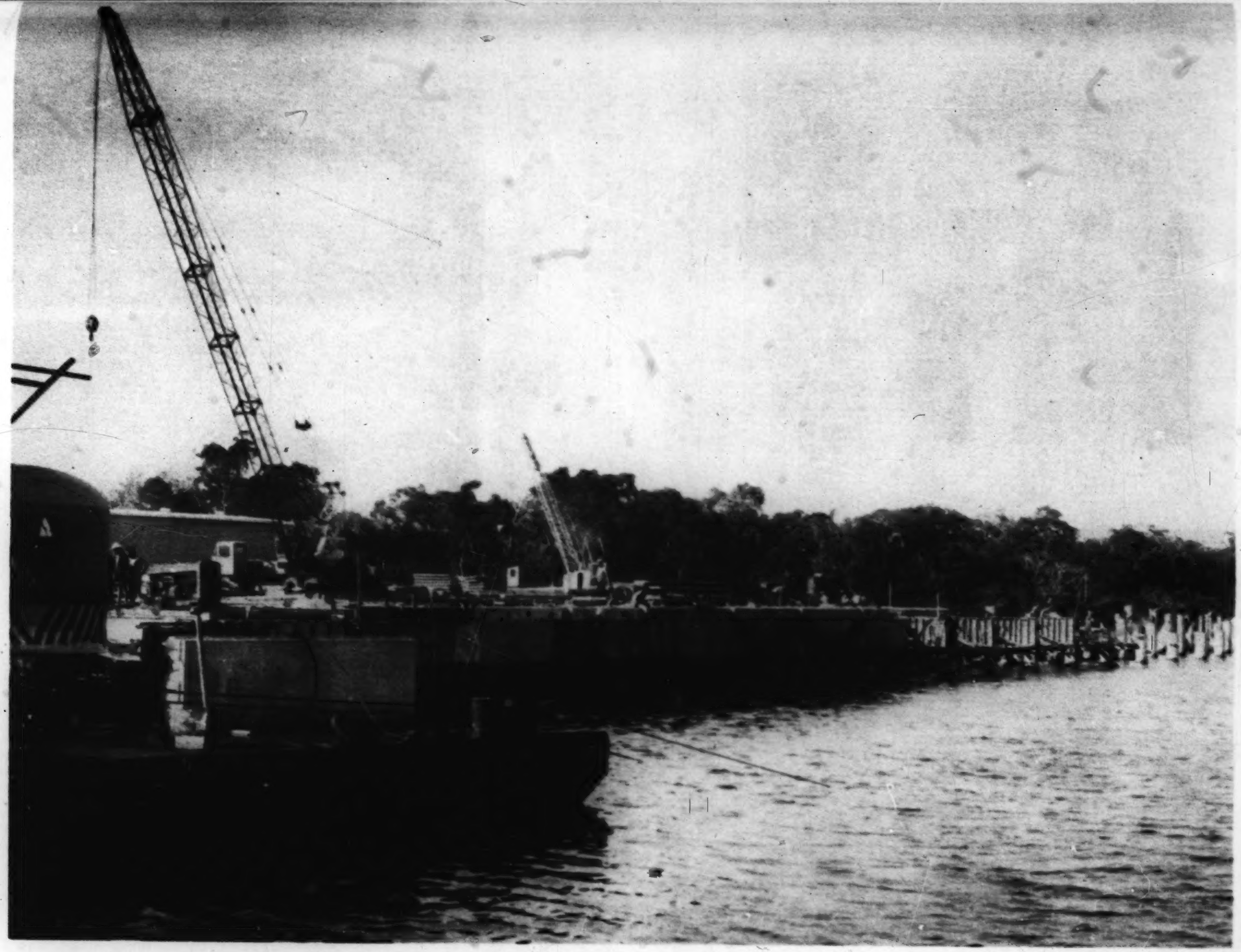
Unless there is a radical change in approach with substantial reductions in maintenance expenditures, the public funds available for investment in the development of the country will be limited. The nation will necessarily have to rely on outside sources for public capital programmes and investment in basic economic activity.

Nursery beds at the South Pacific Tropical Agricultural College



Transport of Agricultural produce

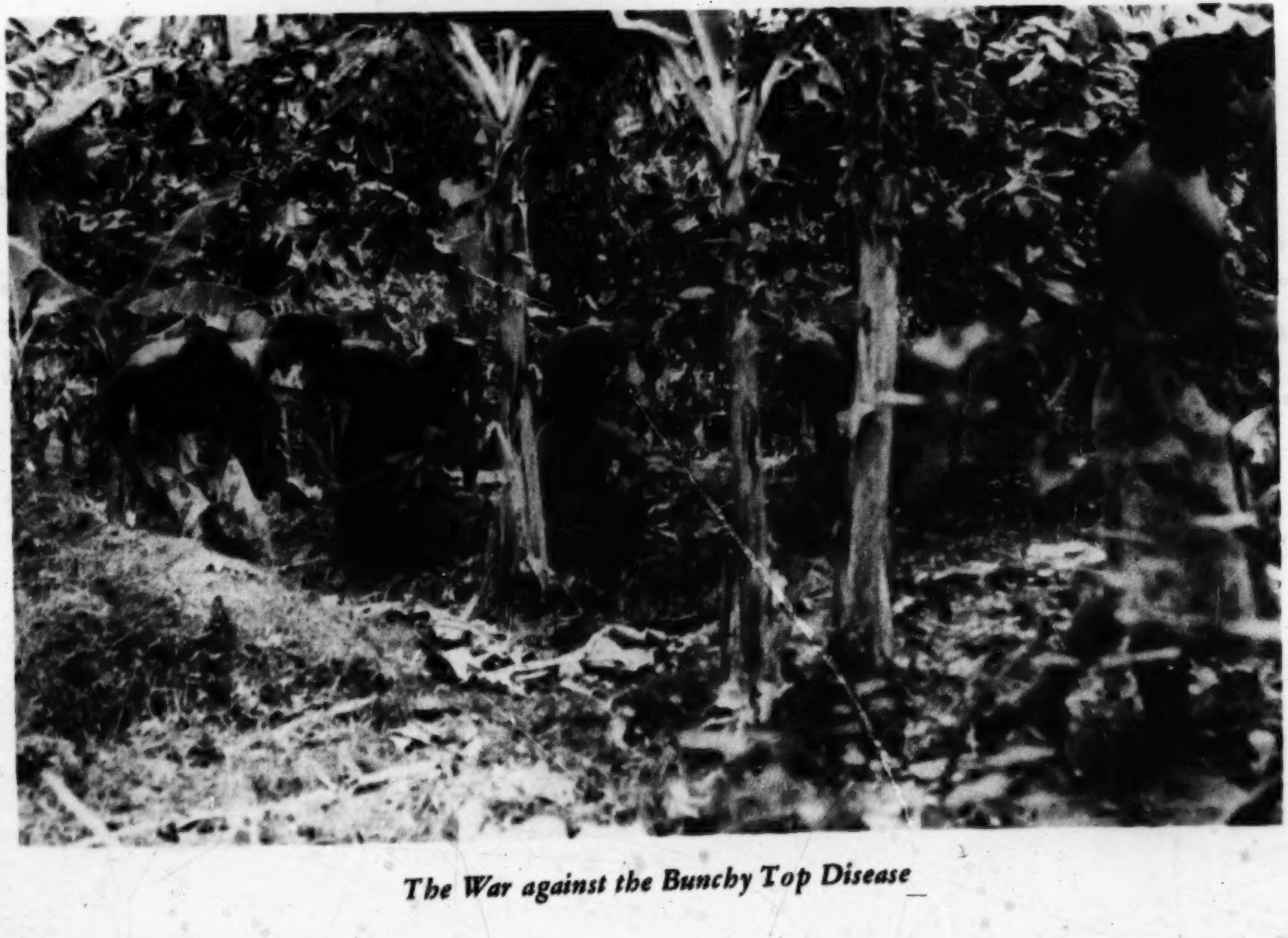
Family cutting copra



Asau Wharf under construction

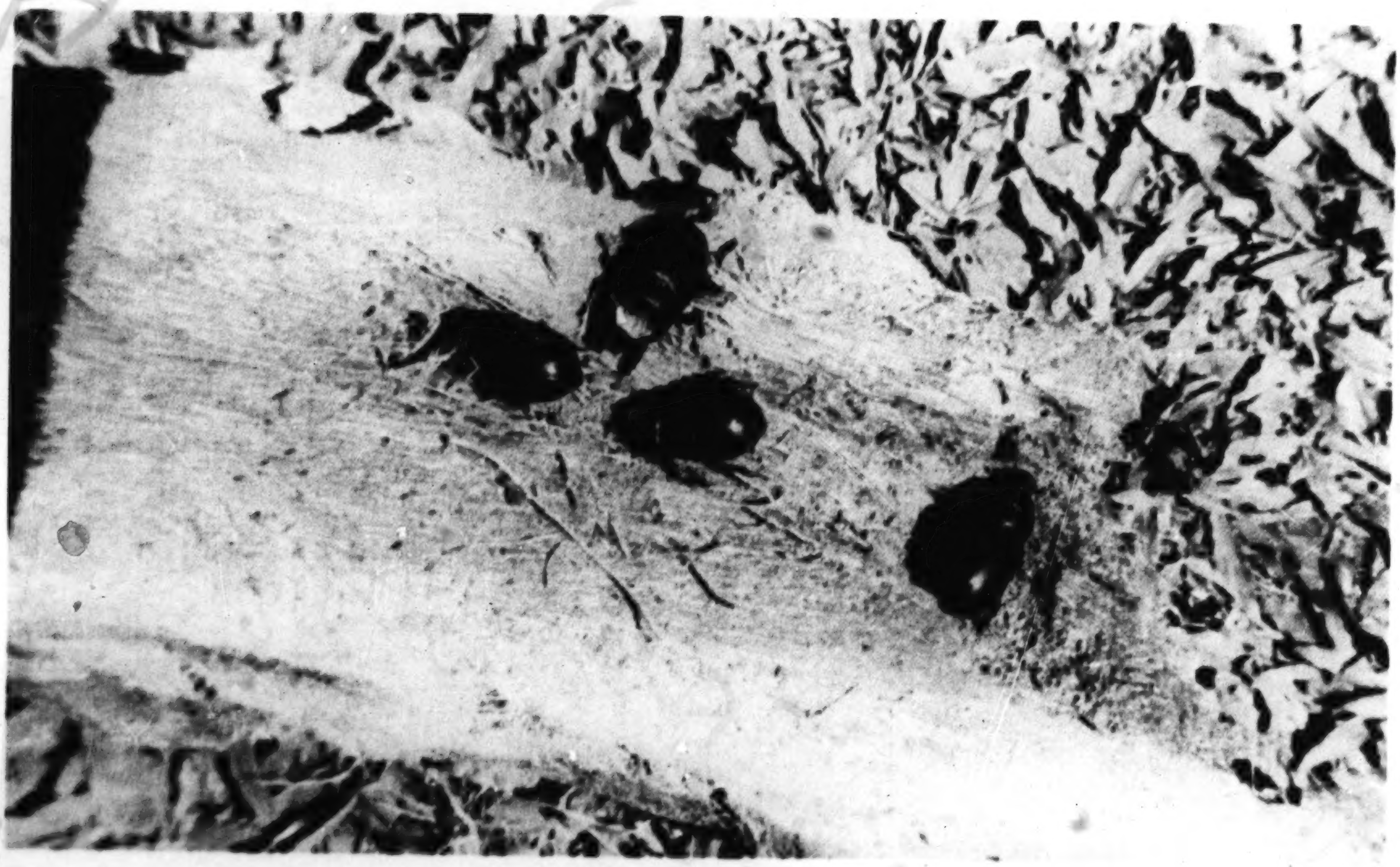
Weedicides comes to a Samoan plantation

A healthy banana stand and bunch



The War against the Bunchy Top Disease

Rat Damage Control Experiment



Four full-grown rhinoceros beetles

Section X

Development Budget

The 1966-1970 Development Plan Budget was pased by the Legislative Assembly in December 1965. In early 1966, several of the projects were postponed because of financial problems resulting from the hurricane. Following are excerpst from the Development Budget statement by the Hon. G. F. D. Betham, Minister of Finance and Economic Development:

"In presenting the 1966 Development Budget, I should like to thank everyone who in any material way in direct personal participation or with helpful constructive ideas, has contributed in assisting Government in its approach to the country's 1966-1970 5-year programme of national development. As this is essentially a joint effort by the Government and the people together, it is to be hoped that many others will associate themselves with this selfless spirit of national cooporation so that the final Plan will not only more fully express the nation's desires and objectives but will also more importantly have the support and acceptance of the country as the 'People's Plan'.

There are many phases in the planning of a national development programme and if it is to be done wisely and properly there cannot be any shortcuts especially when it must be contained within the restraints of very limited funds. The man-hours and paper work entailed in the preparatory process is considerable and necessarily requires many months of concentrated effort on the part of the planning and processing organisation, the advisory committees, and the Development Board.

The administrative machinery which was given legal status with the recent pasage of the Economic Development Act, functions with the Economic Development Department acting as the coordinating link with the substantive departments and their advisory committees and the Development Board. In addition to the Industrial Development Advisory Committee, there are six widely representative committees including many members of Parliament in the substantive fields of Agriculture, Lands, Education, Health, Works, and Finance whose prime purpose it is to initiate and develop projects in their substantive areas which are then referred to the Development Board with a full cost analysis in respect of each recommended project. Some fifty members of the advisory committees participated in the structure of the projects reaching the Board.

In order that it can anlyse and evaluate each project in relation to its income and job creating potential and other considerations it is indispensable that the Board should be supplied with the fullest basic details with every project recommendation. A cost analysis over the five year period is a prerequisite to ensure firstly that we are not over-reaching ourselves and secondly that once approved and started the orderly continuance of a project to its completion within the funds provided is a practical measure. These practical steps which demonstrate the value of systematic planning cannot be disregarded without inviting chaos and the Board therefore had to review and revise a number of project proposals accordingly and to take all factors into account in determining the priorities to be recommended to Cabinet for inclusion in the 1966 Development Budget..........

When it is realised that total project requests would have required £785,000 for 1966 through to a total expenditure of £7½ million for the 1966-1970 period as against the modest £1million that local Government financing can provide over the 5-year period, it will be appreciated that the Board's task was not an enviable one. However, as weighty as the original requests were there is no gain saying that the Committees' proposals were not without merit. On this score I would say that we cannot lose sight of their importance and essential role in the scheme and pattern that the country's orderly development must follow in the future. But an acceleration in the development of roads, water supplies, extension and upgrading of our health, education and other social services, tele-communications, electric power supply, transportation and visitor support facilities, public buildings and other structures, as well as agricultural and other development necessarily calls for very heavy investments for in excess of what our present slender purse can purchase.

Purely and simply very little can be accomplished in these areas unless there is a rapid acceleration in the earning capacity of the nation and for this reason the budget proposals now presented to you focus the emphasis on those projects which can produce the greatest stimulus to the economy in the next few years. The biggest impact is expected from the Agriculture Development projects totalling £99,280 or 46% of the 1966 Budget and claiming 61.4% of the overall 5-year programme. The Visitor and Secondary Industry projects have been allocated 22.2% of the 1966 expenditure and the Public Works projects 22.5%".

Summary of Projects

Following is a summary of the projects included in the five year plan programme:

Agricultural Projects

1. Coconut Planting and Replanting Incentives

The expenditure of £17,870 in 1966 with a consistently increasing expenditure through the other four years of the Economic Plan is geared toward the stimulation of increased copra production by providing subsidies to planters, fertiliser and field assistance. The total estimated expenditure throughout the five year period is £225,735. With this investment it is estimated that some 15,800 acres will be planted and replanted throughout the five-year period. By 1973 the new coconut trees will begin to bear and the country will start receiving revenues from these plantings. By 1977 it is estimated that the nation will receive some £300,000 from the plantings with increasing amount as the trees mature. When the trees are fully matured more than £1million will accrue to the nation as a result of these plantings.

It is planned that subsidies will be given for 2,000 acres in 1966, 3,000 acres in 1967 and 3,600 acres for each year 1968 through 1970.

It is believed that the proper implementation of this projection will result in a considerable economic boost to the economy and provide an economic legacy for the future population of the nation.

The Copra Board has offered to assist in the implementation of this project with an annual grant of £20,000 over the 5-year period. The entire cost of the project in the first year will be borne by the Copra Board.

2. Cocoa Planting Projects

This project associated with the Multiplication of Superior Cocoa Planting Materials Project and is designed to provide effective assistance to the planters in properly planting and taking care of the Lafi 7 cuttings. Provision is made for fertilizer and assisting growers by purchasing certain basic equipment such as a Knapsack sprayer, pruning gear and chemicals.

During the first half of 1966, 80 acres in 40 acre plots will have been cleared and a similar amount during the second half of 1966. It is expected that 40 acres will be planted from July through September and an additional 40 acres from Octobe through December.

In addition to the propagation and planting of Lafi 7 cuttings, an amount of £1,500 is provided for the production of Lafi 7 seedling material. The reason for the latter aspect of the project is that there will not be enough Lafi 7 cuttings to supply the entire needs of the country and it is planned to provide planters with seedlings as well as Lafi 7 cuttings.

3. Banana Production Project

This project envisions the supply of planting materials, fertilizer and field assistants to banana planters. It is planned to initiate new production of bananas in the amount of 400 acres from 1966 through 1970 or a total of 2,000 acres throughout the five-year period. At 200 cases per acre it is estimated that production will total some 120,000 cases in 1967 and increase to 360,000 cases by 1970. The returns to the nation in 1970 based on present price per case will total some £450,000. It is estimated that some 1,800 persons (including families) will be employed in the cultivation of this new banana production by 1970. The project includes—

(i) In-service training for field extension officers in order to better equip them to assist the planters.
(ii) The establishment of nurseries both on Upolu and Savai'i to provide planting materials.
(iii) Replanting schemes for those areas which have been devastated by bunchy-top disease.

A total of 4 replanting schemes are planned for each year throughout the five-year Economic Plan.

4. Small Crops Development Project

It has been found that through intelligent production and marketing Western Samoa can increase its exports of additional agricultural products other than the three basic commodities of copra, cocoa and bananas. Already Western Samoa has exported to New Zealand a variety of vegetable and fruit crops.

There is considerable potiential for producing and exporting many other agricultural crops from Western Samoa. This project is designed to provide for three field trials one each at Avele College, Alafua and Salafai High School in the production of these new crops. A variety of crops will be tried including such things as ginger, tobacco, sweet pepper, black peper, beans for export to New Zealand during the winter, different varieties of mangoes, avocado, pawpaw etc. In addition to new crops experiments will be conducted in the production of fruits and vegetables for local sales thus replacing imports of these products from overseas.

This project will provide one field assistant to each of the schools in order to assist in initiating and carrying out the project. It is planned that several acres will be planted in each of these schools as follows:

Avele College	-	3 acres
Alafua	-	5 acres
Salafai	-	5 acres

In addition to the hiring of the field assistants, three recent graduates from Avele Agricultural College will be utilised as trainees. The young men of the three schools will assist in the production and care of the new products thus providing very valuable agricultural education to the students of these schools.

5. Agricultural Research Project

The future of agriculture in Western Samoa depends to a great extent on the development of new crops and the improvement of existing crops. Every country which depends on agriculture as a base for its economy has effective agricultural experimental facilities. Unfortunately, Western Samoa has lagged behind in the development of its agricultural experiment stations.

This project provides for the employment of a fully qualified overseas agricultural experimental officer and it is estimated that it will take some six months to recruit a suitable qualified individual to take over the management of this agricultural research project.

6. Lata Land Development Project

Many overseas experts have indicated that the production per acre in Western Samoa is very low. They have recommended that one important way to improve the production per acre and the total production of agriculture in Western Samoa is to institute agricultural projects on a large scale as well as small individual village type farming.

The Lata Land Development project combines the ideas of large scale agricultural production and the eventual farming of this land by individual Samoan producers. Initially, it is planned that a private development corporation be given a lease for some 40 years in order to develop the Lata lands on an efficient large scale basis. After some 25 years of such production that this land begin to be leased to individual settlers and that by the end of the lease to the private development corporation all of the land be leased to individual settlers. The settlers will acquire the land fully developed with mature crops and cattle.

In order to initiate the project, it is important for Government to provide certain basic services. These include -

(1) The clear delineation of the bounderies of the Lata Land block,
(2) The development of water resources,
(3) A survey of the soil potential of the area,
(4) A timber survey of the Lata Land Block.

With the provision of these services the land will then be leased to the private corporation. The corporation will be responsible for the construction of roads and all further development on this project.

The Government of Western Samoa has requested New Zealand to provide assistance in the development of water resources and in the survey of timber potential. Pending a decision by New Zealand, the cost for water development, soil and timber surveys have been deferred.

There are two parcels of freehold land in the Lata Land Block and it is proposed that these be acquired through purchase or lease so that the Lata Land Block will be one continguous area of development. The W.S.T.E.C. corporation owns some 550 acres and the second property consists of some 180 acres.

It is proposed that the Lata Land be developed in a combination of copra, cattle and macadamia nut production. When the area is fully developed it is estimate that more than £900,000 can be earned by the nation as a result of the production on the Lata Land Block.

7. Asau Land Settlement Scheme

The Asau Settlement Scheme is a project included in the 1965 Economic Plan and approved by the Legislative Assembly.

Under the New Zealand Technical Aid Programme, soil and timber surveys have been conducted on the Asau Lands. The land wil be subdivided according to soil content so that each settler will have roughly the same land equivalent not only in terms of size but also in terms of quality of soil. An average of 20 equivalent acres will be leased to each settler. Discussions have been held with the New Zealand Authorities regarding the possibility of technical aid assistance in developing water resources on the Asau Lands.

The total cost of developing this 6,035 acre block over the 5-year plan period is estimated at £120,810. Expenditures have been with-held pending the completion of negotiations with Potlatch Forests Inc. since that company plans to harvest the timber clearing the land for settlement. Potlatch would also build secondary roads and provide basic utilities.

8. Coconut Planting Materials

The Coconut Planting Materials project was approved by the Legislative Assembly in 1965 and is a continuing project. Some five nurseries have been established and there are some 90,000 seedlings already planted. In addition five more nurseries are scheduled for establishment on the island of Savai'i.

A healthy pawpaw tree

Cut copra being weighed

Village Cleaning Contest

Bananas being trucked to wharf — Savai'i

During the first half of 1966 approximately 8,000 seedlings have been distributed each month. This rate will increase during the latter half of the year.

The amount of £8,400 requested for this project is to carry it forward to provide a continuous supply of coconut planting materials for growers.

9. Food Processing Laboratory Project

The Food Processing Laboratory is a project passed by the Legislative Assembly and included in the 1965 Economic Plan. The project was not initiated in 1965 because a suitable Laboratory Director was not available.

Mr. L. J. Lynch a man renowned in the food processing field was engaged to provide consultation services in the construction and operation of the Food Processing Laboratory. Mr Lynch submitted his report to Government and the construction of the laboratory has commenced. Mr Lynch has been hired as the first director of the laboratory and he will take up his post when construction is completed. The basic equipment for the laboratory with a value of some £6,000 has been gifted by the Australian Government under its technical aid programme.

It is estimated that it will take some six months to construct the laboratory and install the equipment.

The Food Processing Laboratory has great potential for developing the processed products to be manufactured in Western Samoa. These include a variety of canned and frozen fruits and vegetables. The establishment of the laboratory is the first step in intiating an export procesing foods industry for Western Samoa. The potential for such export is almost unlimited and in time will provide hundred of thousands of pounds of income to Western Samoa. Currently, there are some £25,000 of processed foods which are imported so that in addition to exporting processed products, local manufactured products can be substituted for imports thus saving overseas exchange. Fish canning alone can provide an annual income of £250,000 depending on the scale of operations.

The budget request includes funds for the construction of the laboratory, the installation of equipment and the administrative expenses. The annual costs of operating the Food Processing Laboratory will decline in future years since most of the basic equipment and capital expenditure will have been met. It is estimated that an amount of some £11,500 will be needed for 1967; £10,465 in 1968 and approximately £8,000 for 1969 and 1970.

10. Multiplication of Superior Cocoa Planting Materials

The Legislative Assembly approved this project in the 1965 Economic Plan. During 1965 the propagation units have been ordered and construction has commenced on the propagation buildings so that additional Lafi 7 cuttings can be provided to planters. It is estimated that some 100,000 cuttings can be produced each year from the propagation project.

11. Rat Damage Experiment Project

This is a project included in the 1965 Economic Plan.

Five separate areas have been selected as observation blocks in order to determine how much coconut production can be saved by banding coconut trees.

These are located in the following places:

2 at Vailele Plantation
1 at Vaitele
1 at Faleula
1 at Apia Observatory Area

The experiment has already begun in that trees have been banded and investigations have been made in these areas as to the extent of rat damage.

When the experiment is completed projections will be made as to the possible increase in production of coconuts throughout the nation versus the cost of banding.

12. Fumigation Chamber

It is proposed to establish the fumigation centre at the new wharf facilities. This will include a 2,000 cubic foot atmospheric chamber and a gas-tight building. Some of the equipment at Nafanua will be transferred to the new facilities at the wharf.

By locating the fumigation chamber at the wharf facilities it will save shippers a considerable amount of money and time by allowing for the fumigation of their exports at the dock instead of having to go to Nafanua and then transport the agricultural products down to the wharf.

13. Alafua Shed

The Alafua Agricultural College is importing agricultural equipment which will arrive soon.

There is no place to store this equipment. In order to protect the equipment, from the elements, a shed is proposed for this purpose.

14. Sugar cane production

An amount of £2,000 is required to be revoted to enable experimental sugar cane production from existing crops under contract to the Minister of Agriculture.

This project is connected with the sugar processing plant established by a former F.A.O. Agricultural Officer.

Provision for similar amounts is needed for 1967 and 1968 to complete the experimental project.

Visitor and Secondary Industry Projects

1. Government Investment of £40,000 in Resort Hotel

Initially the Government had hoped that the resort hotel project could be financed entirely through Government resources. The current state of Government finances does not permit this approach. The effort now is to induce private capital invenstment in the hotel project.

The consultants have submitted their report titled "Visitor Destination Area Development for Western Samoa". This report recommends that the first resort hotel be located at Cape Lefatu on the island of Upolu. The consultants estimated that the cost of this development including power, water, site development and construction would be some £600,000 for 100 rooms of a first class hotel.

There is no other type of economic activity that brings as many benefits to the community in relation to the amount invested as does a hotel operation. For example, for the Government's investment of £100,000 the estimated direct employment in the hotel operation would be some 150 persons. Indirect employment some 300 persons with a support of some 1,200 people. The income to the nation during the average year from a 100-room hotel operation would be about £460,000 and over a five-year period some £2,300,000.

It is proposed to invest £40,000 in the resort hotel in 1966 and £60,000 in 1967. There are two basic reasons for the Government investing in the hotel project.

(1) To assure the hotel investors that Government fully supports the development of the hotel and will do everything it can to ensure its success.

(2) The Government should be represented on the Board of Directors of the hotel and in that way exert its influence on hotel policy.

It is also recommended that the Hotel Corporation allow investment by the Samoan people in the resort hotel.

2. Pacific Area Travel Association

In 1965 the Government of Western Samoa joined the Pacific Area Travel Association. P.A.T.A. has already issued publicity on Western Samoa and is anxious to do an effective job of advertising and promotion for this country. P.A.T.A. has been sent photographs of village life and places of interest. These photographs will be used together with written publicity to promote the beauty and culture of the nation.

The Pacific Area Travel Association has two basic aspects to its membership fee. One, a basic membership fee and the other is based on the total cost of advertising pro-rated according to the size of the Visitor Industry in a particular nation. Western Samoa pays the minimum membership fee allowed for a national membership.

In 1966 the membership fee is some £475.

3. Handicrafts Industry Grant

The Handicrafts Industry project was approved

"Ta'alolo"—Presentation of food to guests

A typical Samoan table

Girls in Traditional dancing costume

The investiture of a chief

Looking down to the sea, Fagafau, Savai'i

Papa Satana, Savai'i

by the Legislative Assembly and included in the 1965 Economic Plan. Recently the Legislative Assembly passed legislation to allow for the establishment of a Handicrafts Industry Development Corporation. The corporation has initiated operations with the hiring of a manager and assistant.

A grant of £7,360 has been made by Government to permit the Corporation to begin its operations. The project calls for the establishment of a handicrafts industry factory as well as the purchase of handicrafts from villages throughout the nation.

It is expected that only small amounts of money will be requested in 1967 and 1968 (£1,000 each year) to assist the Corporation to become firmly established. After this it is expected that the Corporation will operate at a profit from the sales of handicrafts both in Western Samoa and overseas.

Public Works Projects (Continuing)

1. Cross Island Road, Upolu

The Apia/Siumu Road was started in 1963 at an estimated cost of £75,000. Some 10 miles of road remain to be constructed including four miles of re-alignment between Apia and Afiamalu.

£10,000 is requested for continuation for this project in 1966. It is estimated that an additional £15,000 will be needed in 1967 and £20,000 in 1968 to complete this project.

It is estimated that a road bed be completed during 1966 from Afiamalu to Siumu as well as the new by-pass route to Afiamalu.

With the construction of this road, the central part of Upolu will be opened giving acces to the other side of Upolu and making large areas of land available for agricultural purposes.

2. Vaiola/Patamea Road, Savaiʻi

The Vaiola/Patamea Road was started some years ago in order to open up large quantities of agricultural lands in the Faasaleleaga District of Savaiʻi.

There are some six miles of road remaining to join Vaiola with Patamea. The amount requested in 1966 is £6,000 which is etimated will be enough to construct about three miles of road. An additional £8,000 is estimated as needed in 1967 to complete this road.

3. Access Roads

Some £5,000 is recommended in 1966 for the construction of Access Roads.

In 1967 and 1968 it is estimated that £10,000 will be needed in each of those years to continue access road construction. In 1969 and 1970 it is hoped to step up even further the construction of access roading and provided Government funds are available, it is estimated that some £15,000 will be utilised for the construction of access roads.

It is estimated that some £55,000 can be effectively applied to access road construction during the five year period.

4. Asau Wharf Road

Some £3,000 is needed to construct the Asau Wharf Road in order to connect the wharf with the main road.

The Asau Wharf is needed in the development of the harbour facilities at Asau.

Public Works Projects (New)

5. Central Market, Apia (Postponed in 1966 because of hurricane)

There is a need to provide adequate and sanitary space for farmers to display and sell their agricultural products. Currently people attempt to sell their agricultural products on the streets of Apia. This procedure is very unsatisfactory in that it is not hygienic; it obstructs traffic; and, it spoils the beauty and order of the town of Apia.

It is proposed to establish a clean and efficiently operated market place at the present location of the Banana Shed.

It is proposed that the entire area which now constitutes the Banana Shed operations be constructed as a Central Fresh Produce and Fish Market Area.

The project will be initiated when the present Banana Shed operations are moved to the new wharf site.

It is proposed to—

(1) Appoint a market master who will supervise the operations of the market.
(2) Construction of stalls.
(3) Rules and regulations will be established for the operation of the market place.
(4) Some 5/- per day or part thereof is proposed to be charged for the rental of each fresh produce stall.
(5) The market operations will be the responsibility of the chief Marketing Officer who will give direction to the market master.
(6) The allocation of stalls will be made by the Chief Marketing Officer.
(7) The market will be opened for business between the hours of 6.00 a.m. and 5.30 p.m. on Mondays, Tuesdays, Wednesdays, Thursdays and between the hours of 6.00 a.m. and 8.00 p.m. on Fridays and Saturdays. On public holidays, the market shall be opened between the hours of 7.00 a.m. and 9.00 a.m. The market will be closed on Sundays, Good Friday and Christmas Day.

6. Minor Electrical Extensions, Apia

The purpose of this project is to provide funds to connect new houses, factories and commercial enterprises within the existing Apia power system to the main line.

The funds requested include the cost of meters, service lines, and occasional low tension lines. Two transformers will be purchased for the WSTEC soap factory; the newly electrified sawmill at Sogi and other major consumers.

7. East Coast Water Supply

It is proposed to construct a water pipe supply line from Falevao to Solosolo. The funds requested in this project will permit the initiation of the construction of this project and will provide a water pipe line from Falevao to Lufilufi.

It is planned to complete the construction of this pipe line in 1967 by providing £10,000 for construction during that year. This will result in a total project cost of some £18,000.

The benefits to the people along the East Coast are obvious. It would provide them with cleaner water. It will preclude the walking of long distances which are now required to obtain water and will allow the people to apply themselves to more fruitful tasks.

8. Samusu Water Supply

The adjacent villages of Samusu and Amaile have no piped water supply. Some 900 persons of these two villages depend on a coastal spring for water which is not protected from contamination and which is brackish at high tide.

For a limited expenditure a piped supply of water will be provided for the inhabitants of the villages of Samusu and Amaile.

9. Water Tanks at Letui and Aopo, Savai'i and Manono

The people of the villages of Letui and Aopo as well as the inhabitants of the island of Manono suffer from a lack of adequate water supply. The problem is particularly acute during dry spells.

Water tanks have been constructed for each of the three areas and will better ensure that the people of these areas have drinking water available to them.

10. East Falealili Water Supply

The area from Tafatafa to Salani is served by only three rivers and two springs for water supplies. The rivers and springs are subject to contamination. A piped water supply will provide for a cleaner source of water for some 13,000 inhabitants of the area.

Approximately one-third of the project is expected to be completed in 1966. An amount of £8,100 is estimated for 1967 which will complete the water pipe line for this project.

Health Projects

1. Community Water Supply and School Sanitation Project

The World Health Organisation Sanitary Engineer for the Pacific Area assisted the Health Department and the Department of Public Works to develop a project to provide water for some 10 villages in the Safata District from Lotofaga to Sa'aga. In addition it is proposed to provide sanitary facilities for the schools in the area.

This area has been chosen by the World Heath Organisation and Department of Health because of the large incidence of disease due to contaminated water.

The contribution to the project is as follows for 1966:

UNICEF	£6,950
Government of Western Samoa	6,250
Village Labour — equivalent to	6,000

In 1967 it is proposed that—

UNICEF contribute some	£5,940
Government of Western Samoa	5,550 (direct cash outlay)
Village contribution	8,140 (primarily labour)

If this project is successful it is hoped that WHO and UNICEF will contribute to similar projects for other areas in Western Samoa.

Education Projects

1. Material for Piggery, Fowlhouses and Dairy, Salafai High School (Postponed because of hurricane).

Salafai High School has developed a strong practical agricultural education for its students. The school has cattle as well as a number of hens but no pigs.

With the advice of the Department of Agriculture and under the direction of the Principal, facilities will be constructed by the students to house cattle and hens and to introduce pigs to the school.

Provision of these facilities will permit instruction to be more effective in the raising and caring for livestock.

2. Equipment for Secretarial Course, Samoa College

There is a need to provide qualified instruction for training secretaries in Western Samoa. There is a qualified individual at Samoa College who is able to teach secretarial subjects. There is a need, however, to provide basic equipment and text books in order to initiate this course.

The following equipment has been purchased: filing equipment; an accounting machine; three calculating machines; four adding machines; two copy holders; text books and sundries for 1966.

By providing trained secretaries, both Government as well as private business will benefit by having more efficient stenographers and secretaries.

3. Construction Shed Storeroom, Trades Training Institute

The Trades Training Institute provides educational facilities for some 100 students. It provides training in carpentry, plumbing, engineering and electrical work. It is the major training facilitity in disciplined educational environment.

Materials have been provided for the construction of a shed and store-room by the students. This will relieve over-crowding, allow for the better preservation of electrical equipment and provide experience to the students in the construction of these facilities.

4. Extensions to Workshop, Salafai High School

All students at Salafai High School are required to take elementary carpentry work. There is insufficient storage space and not enough room for the required number of additional working benches.

Trade Development and Credit

1. Trade and Development Office, New Zealand

The Trade and Development Office for New Zealand was a project included in the 1965 Economic Plan and approved by the Legislative Assembly. Due primarily to the difficulty of obtaining adequate staff this project has been delayed but is expected to be initiated in 1966.

The amount approved for 1966 provides for the hiring of the Trade and Development Commissioner and a secretary; the purchase of furniture and equipment and general office expenses including the rental of office space.

There is a great need for Western Samoa to promote and sell its products in New Zealand as well as to encourage the introduction of know-how and capital from New Zealand to Western Samoa. In addition, by having a Trade and Development Office in New Zealand, the numerous problems connected with the export of Western Samoan products can be effectively dealt with in New Zealand.

The total project cost during the five-year plan period is estimated at some £27,760.

2. Development Branch — Bank of Western Samoa

The Government has agreed with the Bank of Western Samoa to establish a Development Branch at the Bank which will provide loans to citizens of the country at liberal terms.

The Development Loan Committee has made loans totalling some £10,000.

The amount requested is the agreed upon amount for the Bank to conduct the general administrative work of the Development Loan Branch.

Post Office and Radio Projects

1. Two Radio Masts

The purpose of this project is to improve transmission on the overseas telephone circuits. Two new 60 foot masts are being constructed in 1966.

The Department of Public Works is erecting the masts for the Radio Department.

With the erection of the two masts overseas telephone reception should be improved.

2. Radio Receivers

Difficulty is being experienced in maintaining adequate communication services because of the lack of proper receiving equipment. One general purpose type radio receiver has been ordered.

In view of the increasing demand and the growing difficulties in maintaining overseas communications the new receiver is essential to provide some level of efficient communication.

3. Post Office Boxes

There are more than 100 people on the waiting list who require a Post Office box.

It is estimated that the rental for the first year on the new boxes will total some £400.

Summary of Development Expenditures

Table XLIII shows the allocation of local government investment in the projects of the development programme over the five year programme period. This development budget has been approved by the Legislative Assembly. There are some 37 projects, the largest number in agriculture with 14, followed by Public Works with 10. The emphasis in the development programme is in agriculture which is expected to receive some 61.4% or £586,642 of the total estimated expenditure of £957,467. Public Works initiated projects are estimated to receive £202,400 or 21.1% of the total. Public Works will actually engage in considerably more than this amount indicates since aspects of many of the projects in the other substantive fields are construction oriented and will have to be undertaken by the Public Works Department.

Some £111,835 or 11.7% of the total is slated for the visitor and secondary industry field. The largest part of this total some £100,000 has been set aside for assistance in hotel development.

Trade development and credit has some 3.2% of the total with a £30,260 estimated investment over the five year period. Social services have meager amounts allocated with health projects taking only 2.3% and education projects only .2% of the total. There are a number of reasons for this seeming de-emphasis. Village Schools are built by the villages themselves as is the housing for village teachers. New Zealand has had active interest in edu-

TABLE XLIII
SUMMARY OF DEVELOPMENT BUDGET
(IN £) 1966—1970

Substantive Field	Number of Projects	Estimated Expenditure in 1966	Estimated Expenditure in 1967	Estimated Expenditure in 1968	Estimated Expenditure in 1969	Estimated Expenditure in 1970	Estimated Expenditure 1966—1970 a)	Percentage of Total
1. Agriculture	14	67,130	120,247	114,848	126,827	127,950	586,642	61.4
2. Visitor and Secondary Industry	3	47,835	61,500	1,500	500	500	111,835	11.7
3. Public Works	10	39,670	60,300	37,000	37,500	19,000	202,400	21.1
4. Social Services — Health	2	6,250	7,210	1,660	1,660	1,660	22,095	2.3
5. Social Services — Education	4	2,380	—	—	—	—	3,180	.2
6. Trade Development & Credit	2	3,570	6,700	5,900	5,900	5,900	30,260	3.2
7. Telecommunications	3	1,055	—	—	—	—	1,055	.1
TOTAL ANNUAL COSTS OF ALL PROJECTS	37	£167,890	£255,957	£160,908	£172,387	£155,010	£957,467	100%
GRANT FROM COPRA BOARD:		17,870	20,000	20,000	20,000	20,000	97,870	
		£150,020	£235,957	£140,908	£152,387	£135,010	£859,597	

a) The totals for the five year period do not add up to the totals for each of the five years because the 1966 budget was reduced by reductions resulting from the 1966 hurricane. As most of these reductions are expected to be restored throughout the five year period in order to carry out the approved projects, the final five year totals include the full cost of the projects in the substantial areas.

cation in Western Samoa and has assisted in capital investment in this field. For example, the New Zealand Freedom from Hunger Campaign organisation contributed £80,000 initially for the construction of Alafua College. New Zealand has also offered to build a hostel for the Teachers' Training College. A further reason for the limited investment in the social service field was the lack of suitable development projects submitted from those substantive fields. This has since been rectified in the educational field with a five year development plan. This plan, however, would increase the cost of the entire five year development programme by some 60% to more than 1.5 million — an amount Western Samoa is incapable of financing from local resources.

The amount originally approved for expenditure by the Legislative Assembly for the development budget in 1966 was £215,715. Because of the hurricane in early 1966 and the resulting reduced revenue, a number of projects were postponed as were some steps in projects which received appropriations. One small agricultural project of £2,510 was eliminated. The result was a reduction by the Legislative Assembly of some £47,825 from the 1966 development budget to a total of £167,890 (see Table XLIII). Some £45,000 of this amount is expected to be restored throughout the five year period as the government initiates the approved projects and actions which it postponed because of the hurricane.

Following is a listing of the projects in the five year programme and the 1966 legislative appropriation:

AGRICULTURE	1966 APPROPRIATION	
1. Coconut Planting and Replanting Incentives	£17,870	
2. Cocoa Planting	2,495	
3. Banana Production	13,605	
4. Small Crops Development	1,270	
5. Agricultural Research	890	
6. Lata Land Development	400	
7. Asau Land Settlement Scheme (postponed)	—	
8. Coconut Planting Materials	8,260	
9. Food Processing Laboratory	14,715	
10. Multiplication of Superior Cocoa Planting Materials	1,875	
11. Rat Damage Control Experiment	250	
12. Fumigation Chamber	2,500	
13. Alafua Shed	1,000	
14. Sugar Cane Production	2,000	67,130

VISITOR AND SECONDARY INDUSTRY PROJECTS		
1. Resort Hotel Investment	40,000	
2. Pacific Area Travel Association	475	
3. Handicrafts Grant	7,360	47,835

PUBLIC WORKS PROJECTS (continuing)		
1. Cross Island Road — Upolu	6,670	
2. Vaiola/Patamea Road — Savai'i	4,000	
3. Access Roads	5,000	
4. Asau Wharf Road	3,000	18,670

PUBLIC WORKS (new)

5. Central Market, Apia	200	
6. Minor Electrical Extensions, Apia	5,000	
7. East Coast Water Supply	8,000	
8. Samusu Water Supply	2,250	
9. Water Tanks at Letui and Aopo	900	
10. East Falealili Water Supply	4,650	21,000

HEALTH PROJECTS

1. Community Water Supply and School Sanitation	6,250	
2. Rural Health Plan — 1st Step (postponed)	—	6,250

EDUCATION PROJECTS

1. Material for Piggery, Fowlhouses and Dairy, Salafai High School (postponed)	—	
2. Equipment for Secretarial Course, Samoa College	980	
3. Construction Shed Storeroom Trades Training Institute	800	
4. Extensions to Workshop, Salafai High School	600	2,380

TRADE DEVELOPMENT AND CREDIT

1. Trade and Development Office, New Zealand	3,070	
2. Development Branch, Bank of Western Samoa	500	3,570

POST OFFICE AND RADIO PROJECTS

1. Two radio masts	300	
2. Radio receivers	605	
3. Post Office boxes	150	1,055
		£167,890

In the 1966-1970 project plan approach, Western Samoa has taken another step forward in the planning process. The 1965 annual plan presented the first considered approach to project planning and a priority emphasis of funds available for investment.

In the 1966-1970 plan programme a further step has been taken by setting a goal for public investment expenditure during the five year period and projecting the costs for projects through the five year period to meet the goal established and to plan the annual investment expenditures for all projects.

Cabinet has set £1million as the goal for public development expenditure from local sources. This amount does not approach the need for public facilities investment. The Economic Development Board's substantive advisory committees actually requested some £7.5million over the five year period. This, of course, is much beyond the financial resource capacity of the nation.

In the maturing process in planning for development in Western Samoa, the next area of concentration should be for more substantive planning by the various departments of government. The concept of overall investment needs with a plan as to how such needs might be met should be developed in each substantive area. This approach has been initiated to some extent in education and power development. The first pateau in development planning has been reached and with an increase in substantive planning the nation can better perfect the economic planning process. The value and need for more substantive planning should be impressed upon departmental heads of government.

Section XI

Financing Economic Development

Private Investment

The financing of economic development can be separated into private capital investment and public investment. In section III it was pointed out that some £6,320,000 in investment would be needed in new and expanding economic enterprise during the period 1966-1970 in order to employ the additional 7,500 persons who will be seeking employment during this five year period. The total number of jobs and investment needed over the next 20 years are so large that it can rightfully be questioned as to whether this small country has a reasonable chance of meeting its needs. Is it possible for Western Samoa to attract some £32million in investment to create 36,500 jobs in industry and agriculture? The problem may be awesome but if it is adequately recognized and complete and full support is given to action which can alleviate this need Western Samoa can make significant advances in solving its problems.

There is, of course, a multi-approach to solving the population and employment pressure problem. This include effforts at birth control and negotiations with friendly nations and territories to allow significant numbers of Western Samoans to migrate to their shores. Fiji has undertaken what promises to be a successful programme of birth control. Puerto Rico, a show case for economic development, has encouraged and actually subsidized the outmigration of large numbers of its citizens. These are difficult policy matters that must be grappled with but until programmes are instituted that will retard population growth and the resulting pressure for jobs by those who reach working age, the magnitude of the problem facing Western Samoa must be understood and accepted as a reality. In realistically recognizing the herculean job ahead in providing suitable employment for its people, there must be a clear acceptance of the vast amounts of capital needed in order to solve this problem. Western Samoa is capital hungry. Both in the private and public sectors capital is badly needed.

The question then arises as to what action can Western Samoa take to try and solve the capital investment problem. It is clear that low income and the resulting low propensity for savings leads to the definite conclusion that a very small portion of capital investment can come from Western Samoa itself. Data on the propensity for saving and capital accumulation is not available but the national ability to solve the problem at hand internally is obviously insignificant. It is clear that most of the capital needed must initially come from outside of Western Samoa. In the long run as personal income increases along with the propensity for savings, a greater share of the capital investment needs of the nation can originate from Westtern Samoa.

There are three approaches that should be taken in order to encourage capital investment in Western Samoa. These include:

1. *The encouragement of private capital investment through incentives and promotional effort.*
2. *The establishment of equity capital facilities to better allow capital hungry Western Samoans to invest in their own country.*
3. *The encouragement of the propensity to save for capital accumulation by the people and the investment of such capital within Western Samoa.*

Encouragement of Private Capital

In a mixed economy such as Western Samoa's, Government engages in economic enterprises in a limited way. The capital investment needed must come from private sources and essentially from overseas sources. Australia is the most notable example of a nation which has established a clear policy of outside capital investment and which has resulted in a dynamic growing economy.

Western Samoa, has in fact, taken the initial efforts to encourage private capital investment by:

(a) Passage of the Enterprises Incentives Act granting benefits to new and expanding enterprise;
(b) Offering to invest in new hotel development;
(c) Allowing the lease of customary land for agricultural, hotel, industrial and commercial purposes.

Western Samoa has set the stage for capital investment. The environment for overseas private capital investment growth has been established. The job now is to encourage the investors. The basic need in encouraging private capital investors is development promotion. As already indicated in Section V of this report few people know of Western Samoa. Unless the opportunities for investment in Western Samoa are effectively promoted the fact that an environment has been established for investment will not be sufficient to attract the scale of capital investment needed.

The first step in such promotional development was the approval by the executive and legislative branches of government of the establishment of a Trade and Development Office in New Zealand.

Since New Zealand has the closest economic ties with Western Samoa, it is reasonable and logical to establish the first overseas development office in that country. It is clear, however, that Western Samoa cannot, at this time, afford the establishment of permanent offices in other countries which have entrepreneurs that could be interested in investing in Western Samoa. In addition to New Zealand, countries which have the potential and are most likely to have investors interested in Western Samoa are Australia, Japan, the United States, West Germany and Great Britain. The latter nation is currently having serious internal economic problems and investment overseas has been restricted. In the long term, however, it is a potential source of capital. If overseas development offices cannot be established, the next best alternative is the roving type of promotional development effort. The Department of Economic Development which has the closest detailed knowledge of the opportunities for investment should go to the potential investors and tell them the story of development opportunities in Western Samoa. Selective advertising efforts should also be instituted. A minimum initial annual expenditure of £2,000 for development promotion should be allocated for this purpose. This amount should be increased as efforts mature.

Another approach is to hire, for a limited fee, consultants in the countries listed who can tell the story of Western Samoa's investment opportunities. The problem with consultants or any other organization which has other primary responsibilities is their limited effectiveness because of—

(a) the spread of effort;
(b) their primary responsibility elsewhere and;
(c) the lack of adequate knowledge of Western Samoa.

A third effort which should be undertaken is to utilize Western Samoan businessmen and government officials who are travelling overseas in promotional development effort. An investor's opportunity kit is being developed by the Department of Economic Development for this purpose.

Western Samoa has taken the first step in establishing a climate for investment. The next basic step is the promotional development effort needed to attract capital investment to its shores. Unless Western Samoa is willing to"go all out" on promotional development effort it has very little chance of obtaining the investment capital needed.

Establishment of Equity Capital Credit Facilities

One of the most impending needs by Western Samoan residents in the initiation or expansion of economic enterprise is equity capital. Many operations are started on a "shoestring" which limits the chances of successful operation and certainly limits the ability to expand. The very meager input of capital in agricultural enterprise results in low productivity.

A limited effort in equity capital financing was initiated when the Legislative Assembly made available £10,000 for small low interest loans to the Development Branch of the Bank of Western Samoa. This small amount has all been loaned out.

The New Zealand Government made a grant of £25,000 and a loan of £75,000 at 5½% interest for hurricane plantation restoration. Some £10,000 of this amount is required to be used for administrative costs. This money is to be loaned to planters to rehabilitate their plantations.

What is needed is a permanent development bank operation with adequate resources to assist in the equity capital financing needs of the nation. A minimum of some £250,000 should be borrowed to establish such a development lending organization. Western Samoa has now had some experience in development loan making and it is clear that the administrative requirements in establishing such an organization are such that the cost of proper administration is too great with a smaller lending capacity. The need for equity capital is much greater than this amount and the £250,000 should be considered an initial amount only. The key to such an operation is a well qualified manager. An adequate internationally competitive salary should be set in order to attract a competent individual of proven experience.

Development lending should essentially be restricted to basic job and income creating activity and should include commercial and service oriented activity only as it is a necessary adjunct or support of basic economic activity. The limited equity capital available must be loaned for investment in the basic sources and stimulants of economic activity — secondary industry, agriculture and the visitor industry.

Encourage the Propensity to Save and Investment of Capital Within Western Samoa

Investment in Western Samoa

Capital is formed through saving. Althoug it is clear that the major share of capital needed must be brought in from overseas (i.e. capital formed through other people's savings) capital formation should also be encouraged within Western Samoa.

On 1 July 1966 there was £176,784 in savings deposits at the Bank of Western Samoa and £274,397 on deposit at the Post Office Savings Bank or a total of £451,181 in savings deposits in Western Samoa. Funds thus saved are used as a base for loans and investment within the community. The some £500,000 reserve funds of the Copra Board are essentially invested in New Zealand. The some £950,000 of accumulated capital should all be invested in Western Samoa not overseas. Western Samoa is now in fact in the peculiar position of having to pay a higher rate of interest for borrowing from overseas than it receives on its investments overseas. It does not make sense to invest capital overseas when it is so badly needed at home. It makes even less sense to invest money overseas and obtain a lower return than the interest which has to be paid for overseas borrowing.

It may be said that in the past the opportunities were not available in Western Samoa for investment. This is certainly not the present situation and the need for capital investment will increase considerably in the future. It is not too much to require that institutional capital funds such as savings institutions, Copra Board, Banana Reserves and insurance premiums to be invested in Western Samoa. This requirement is common not only in developing countries but also in a number of developed countries. The restrictions on capital movements by some countries are, in fact, quite severe. Western Samoa is capital starved and its limited capital accumulation must be invested within the country.

The investment of £250,000 in accumulated capital in an equity lending organization will bring manifold benefits to Western Samoa in increased production, exports and income. The necessity for a certain amount of liquidity of capital assets by institutional investors can be satisfied in several ways such as the type of investment made and the percent of total of the investment made in less liquid investment. Even if such funds were invested as fixed deposits on account at the Bank of Western Samoa, it would preserve liquidity and provide a considerable expansion in the availability of capital for investment in Western Samoa. The necessity for liquidity has in most cases been over-emphasized. The Copra Board experience for example, has been that throughout its history, only a relatively small part of its reserves have had to be used to stabilize prices. The Copra Board can, by law, lend government up to 40% of its reserves or some £200,000 based on current reserves. The Copra Board can also directly grant or invest the interest on its investment and is in fact doing this by making an annual grant for the coconut planting and replanting project.

Table XLIV shows where Western Samoa's Institutional Funds have been invested.

TABLE XLIV

INVESTMENT OF WESTERN SAMOA'S INSTITUTIONAL FUNDS AT 31 DECEMBER 1965

Overseas Investments which can be Invested in Western Samoa			
Post Office Savings Bank Reserve:	New Zealand Securities	£215,000	
Insurance Reserve:	" " "	60,000	
Banana Account Reserve:	" " "	77,000	
Copra Board Reserve Fund:	" " "	425,000	
Treasury Fund:	" " "	146,000	
Treasury Fund National Provident Fund:	" "	168,396	
Funds Not Invested			
Copra Board Reserve Fund		88,133	£1,179,529
Other Overseas Investment			
Investment in Germany (for payments on generators)			67,359
Investments in Western Samoa			
Post Office Savings Bank Reserves:	Western Samoa Securities	£66,360	
Sinking Fund Reserve:	" " "	18,041	
Banana Account Reserve:	Fixed Deposit	30,000	
Copra Board Reserve Fund	" "	75,000	189,401
TOTAL INSTITUTIONAL FUND INVESTED:			£1,436,289

Some £1,246,888 or 86.8% of total institutional funds invested were invested overseas. Only 13.2% or £189,401 of Western Samoa's institutional funds were invested in Western Samoa.

Western Samoa is now attempting to attract overseas investment capital to its shores. In order to effectively do this the nation should show the investor that it has confidence in its own economy by investing its available capital within Western Samoa. This will not only give confidence to the potential investor but it will considerably expand capital availability which will in turn considerably expand economic activity resulting in a multiplier or snowballing effect. It can fairly be stated that Western Samoa cannot afford to invest its limited capital overseas. As a capital starved country it must by necessity invest internally.

In addition to the over £1million in institutional funds already indicated as being invested overseas and which can properly be invested in Western Samoa, there are additional leakages of funds which, if prevented, could assist in forming a capital base. For example, in 1965 some £60,479 in insurance premiums went overseas. Insurance premiums are a form of saving, i.e. capital accumulation. There are many countries which require that insurance premiums be invested in the area in which they are earned. Insurance premiums will be growing at a rapid rate and there should be a requirement that they be invested in Western Samoa. Not only will such a requirement assist in the development of Western Samoa but preventing this leakage overseas will prevent a loss of foreign exchange and assist in improving the balance of payments situation.

Similarly in 1965, an amount of £119,887 in personal remittances were sent overseas. Restrictions have from time to time been imposed on Western Samoans living overseas which have impeded the flow of personal receipts to Western Samoa. Western Samoa is in a considerably more serious situation in terms of its balance of payments picture and its need for capital. It too must restrict the movement of personal remittances. The retention of such accumulated funds within the country is a common form of restriction by developing as well as developed countries.

In addition to restricting remittances by citizens of Western Samoa overseas personnel working in the country might be required to keep whatever earnings they receive in Western Samoa until their tour of duty is over. At such time full repatriation of such savings should be allowed. In the meantime the nation has had the benefit of the use of any such savings. Overseas personnel paid by foreign firms or international organizations can arrange to have part of their earnings paid in their home country.

Much has been said about the valuable contribution of Samoans living overseas who send money to relatives in Western Samoa. These contributions are indeed valuable but the net of personal receipts over personal remittances is a more sobering figure. For example, in 1965 personal receipts totalled £371,895 but after deducting personal remittances of £119,887 the net gain is only £252,008. Because of the hurricane personal remittances are down but in normal years leakages from this source can be considerable. Restrictions have now been imposed against the sending of New Zealand currency through mail to Western Samoa. The net effect of such a restriction on personal receipts remains to be seen but it is bound to reduce such receipts at least initially.

Taken together an additional amount of some £1.3million could optimumly be injected into the capital stream of Western Samoa without any injection of outside capital investment.

Care should be taken not to restrict the earnings of overseas investors or companies from being remitted. If such restrictions are imposed overseas, private capital investment will be thwarted. Remittances of profits and dividends are actually a very minor part of the volume of economic activity generated by such individual investors and overseas companies.

Propensity to Save

In addition to requiring the investment of accumulated institutional capital funds the propensity for savings should be encouraged in Western Samoa.

A population which is just emerging into a money income economy has to be taught the value of thrift. It is true that the per capita income of the rural population is low and that vast amounts cannot be expected to be accumulated. Even if only a modest amount is accumulated it can go a long way toward satisfying the modest needs of the rural population. The organization in which to effectuate this village saving has already been established in Western Samoa — The Credit Union. There are 22 Credit Unions in Western Samoa which are federated into an organization called the Western Samoa Credit Union League. What is needed is an expansion of village Credit Unions so that this idea can be spread throughout the nation. Members of each Credit Union save with that organization and receive interest on their savings. The accumulation of such savings allows members to borrow money and make regular payments on such loans. The money is borrowed at low interest rates and is usually used for small things such as farm implements, the purchase of a cow, the purchase of fish nets, school fees, etc. These are modest needs but even these modest needs, if fulfilled, will lead to increased productivity and a more satisfying life. In the meantime people have the opportunity for learning the use and value of money in an increasing money economy. As the Credit Unions grow so will the capital accumulated. This capital will in turn be invested within Western Samoa.

Full support should be given to the expansion of the Credit Union system in Western Samoa.

Public Investment

Private investment is essentially made in economic enterprise. Public investment is essentially made in infrastructure such as roads, water development, power development, transportation, visitor support facilities, public buildings and other facilities as well as health, education, agriculture, handicrafts and other development.

In private investment government establishes "the rules of the game". It stimulates, as in the Enterprises Incentives Act and promotional effort, or it retards and prevents if it feels particular activities or enterprises are detrimental. In the type of mixed economy (limited free enterprise) prevalent in Western Samoa, Government's effort is to stimulate and guide private investment.

With public investment, government has complete control and detailed planning and budgeting are possible.

Western Samoa is evolving from a primarily project approach as in the 1965 Economic Plan to a comprehensive public investment plan. More can be done to perfect the public planning process but considering the stage of political, social and economic structure as well as the state of development effective evolutionary progress is being made.

The objective of public investment planning should be the wise and prudent use of public funds so that the maximum effective development of the nation can take place. This is particularly true where the needs are so great and the availability of capital investment funds are so limited. Within such a situation there is a strong competition between the substantive departments for available capital investment funds. In such a situation some hard decisions have to be made as to priority and allocation of available capital resources. Such decisions do not leave everyone, if anyone, happy since there are not enough capital investment funds available initially to properly fulfill the needs of any of the substantive fields.

Faced with a situation in which the cost of maintenance operations severely limits the accumulation of capital and with dwindling reserves, government has applied the major part of its limited available investment capital into stimulating basic economic activity. Government realizes that if basic economic activity can be expanded government revenues will also expand and its ability to do better justice to the capital needs of the various substantive areas will expand commensurately.

Borrowing

If government cannot finance capital improvement needs from its own resources, why does it not borrow from overseas, as so many other developing countries have done, and pay back these loans from future revenues.

On the surface this would seem the thing to do else social progress and infrastructure development will be retarded. Borrowing for development, however, is not the panacea it appears to be to so many people. The problem of servicing debt plagues the developing countries of the world. Too many countries in their enthusiasm for development have incurred debts beyond their capacity to service such debt. Consequently, a great portion of their income goes to servicing loans.

Western Samoa's current ability to service debt is limited. This has been further negatively affected by the considerably reduced government income resulting from the hurricane in early 1966. The effect of this storm on revenues will be felt through a good part of 1967.

Considering the nation's low reserves, the demands for maintenance expenditure and the limited potential revenues through the 1960's it has been estimated that an average of only about £100,000 per year can be provided for public development investment from local resources throughout the five year period of the development programme.

Further the nation has already incurred £1,325,000 in debt for which it will have to pay over £2million in order to amortize principal and interest. In addition to the loans already made, it will be necessary to borrow over £200,000 to finance the five year development plan projects already approved.

The harbour loan is the biggest loan at £1 million. This loan which was taken at 5¼% interest per annum has to be paid in two instalments; £406,600 due on 15 August 1974 and £593,400 is due on 15 August 1984. In addition there are two national loans. One for £78,640 at 5¼% interest due 15 April 1969 and another for £171,360 at 5¾% due 15 April 1973—1974.

The agricultural rehabilitation loan of £75,000 at 5¼% interest is scheduled to be amortized over a five year period starting in 1969.

The development loan for the five year programme is yet to be made and so the terms are not known at this time. The amount needed totals some £204,000. It is assumed that no more than 4% interest will be paid and that the money borrowed will be taken in the year it is needed.

The projected government revenue for 1970 is some £3,140,000 and, assuming a certain amount of discipline, the projected maintenance expenditure at some £2,920,000.

This leaves only £220,000 for maintenance capital and development capital expenditures. This projection accounts only for principal and interest to be paid according to the established schedule of repayments. This schedule is not sufficient to meet the principal payments when due for the harbour loan and national loans. The remaining 60's will show an even less optimistic picture since the negative effect of the hurricane, disease and inefficient agricultural production will be even less compensated by results of development efforts.

Considering its low reserve position, (£338,191 — 31 December 1965 less estimated deficit £220,470 in 1966 = estimated Res. of £117,721 as of 31 December 1966), which is optimistically estimated at some £117,700, and anticipated receipts and expenditures, the Western Samoan Government has already reached and surpassed the prudent limit for amortization of loans during the 1960's and early 1970's.

Is borrowing for development then completely out of the picture. Not necessarily as long as there is a suitable moratorium on the beginning of amortization payments and the interest rate is kept low. Payments on additional loans should not begin before 1973 and more preferably not before 1975.

The debt choking effect on the economies of developing countries of even moderate interest rates on a long term loan is receiving greater recognition by multi-lateral aid giving organizations as well as by bilateral aid givers. Giving the developing country a "holiday" or a moratorium on initiating the amortization of loans until development efforts mature and become revenue producing is also receiving recognition. Thus the International Development Association (which is affiliated with the World Bank and the International Monetary Fund) is making fifty year loans with no interest but with a service charge of ¾ of 1%. The World Bank has recenttly made loans of thirty years with a ten year moratorium on payback and another for thirty-five years with a five year grace period. Canada makes loans with no interest and charges only ¾ of 1% as a service charge. About one-half of the current official bilateral loans extended to developing countries carry rates of interest of less than 3% and maturities of twenty years or more. In bilateral aid it is quite common for developing countries to bargain for good terms with the aid giving country. Western Samoa must also learn to bargain for favourable terms.

But even with the most favourable terms, Western Samoa cannot possibly borrow to meet all of its development capital needs. For example, the following is a listing of most of the requests for development financing by various substantive fields which could not be included in the five year development budget.

TABLE XLV

REQUESTS BY SUBSTANTIVE DEPARTMENTS FOR DEVELOPMENT FUNDS NOT APPROVED

Agriculture			
1. National Pig Upgrading		£10,192	
2. Coconut Planting and Replanting (addition to amount granted)		1,012,265	£1,022,457
Visitor and Secondary Industry			
1. Airport Facilities		£5,800	
2. Clearing of Outdoor Fale Uila		4,250	
3. Access to Places of Interest	(a) Papase'ea Sliding Rocks	2,400	
	(b) Papaloa Falls	1,200	
	(c) Stevenson's Tomb	100	13,750
Public Works			
1. Central Market, Apia		£10,000	
2. Asau Water Supply		20,000	
3. Road Development, Savai'i		1,457,000	
4. Road Development, Upolu		1,780,000	
5. Electric Power Scheme		539,950	3,806,000
Social Services Health			
1. Rural Health Plan		£134,325	
2. Reconstruction of Nurses' Quarters		6,000	140,325
Social Services Education			
1. Education Development Plan a)		£515,000	515,000
Telecommunications			
1. Lepea/Afega Telephone Circuits		£2,680	2,680
			£4,926,988

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a) This plan was not submitted in time to be considered by the Economic Development Board, Cabinet and the Legislative Assembly. A number of small projects were submitted by the Education Development Advisory Committee, such as staff houses for district schools and district inspectors, paving the walkways at Salafai High School, etc. Since most of these projects are in the Education Development Plan, they are not included here.

It will be noted that the total exceeds £4.9 million. It does not include the upgrading of the Apia General Hospital, the construction of a new airport on Upolu, a landing strip on Savai'i and a number of other projects considered necessary for infrastructure and social services. Further, after 1970 there will be considerable additional capital needs. For example, the Afulilo Hydro Station development will be very costly — some £300,000 to £500,000. In addition this station will require £100,000 to £180,000 for transmission lines from Salani to Apia. This is just one example of a major need in the 1970's. The point to be made is that Western Samoa's public capital investment needs will be increasing and that it is doubtful that Western Samoa's borrowing capacity will grow sufficiently to service such needs.

The Government has recognized this problem and Cabinet has established "Principles, Framework and Goals — 1966—1970 Economic Plan" (see Appendix) in which the following is stated:

> "Western Samoa must profit by the mistakes of many of the developing countries and will not let its ambitions and aspirations cause it to incur development debt which cannot, at least for the most part, be paid back directly or indirectly. by the project for which it has been borrowed.
>
> Private overseas investment in basic economic activity, on the other hand, creates no obligation upon the nation to repay. It creates jobs. income and tax revenues at little or no cost or risk, to Government".

Government has taken action to interest a private telephone company to undertake the provision of telephone services. Government realizes that it does not have the capacity ot finance the extension of telephone services and to provide the modern equipment needed for existing services.

The same approach can be taken in power development or alternatively establishing the Power Scheme as an independent authority with the ability to establish charges and to float bonds in order to raise its own funds for power development.

Water development should also be placed on a self-financing basis, as much as possible, for both maintenance and capital expenditures.

Another operation which is revenue producing and should be placed on an independent self-financing basis is broadcasting.

The construction of main roads is necessarily a function of Government. The investment capital needed for road construction is considerable. Public Works estimates that it will take more than £3.2 million for construction of main roads. A common and logical way to finance road development is for the road users to help pay for upkeep and construction of new roads. Since the direct beneficiaries of road construction are those who own vehicles, a direct tax on fuel which is earmarked for road construction and maintenance can materially contribute to upgrading of main roads. It is estimated that with a fuel tax of one shilling per gallon, some £67,000 in additional revenue can be raised. This annual revenue can be utilized to raise a loan of some £825,000. A 9d per gallon fuel tax would result in an annual revenue of some £50,000 which can be utilized to raise a loan of some £620,000. The effort should be to raise this money through a revenue bond issue,rather than through a general obligation bond issue. In a revenue bond issue, it is the specific revenue (in this case fuel tax) which is obligated for the loan. The general revenues of the nation would not be obligated only the revenues from the fuel tax. In a general bond issue the entire revenues of the nation are pledged.

Since Western Samoa has not established a credit rating in bond markets, it may be necessary to give certain guarantees for initial bond issues.

Revenue bonds can also be used for water and power development.

The advantage of utilizing the revenue bond approach is that the funds borrowed are tied to the activity that is utilizing the funds. The Government's credit capacity is not impaired and the Government can concerntrate its capital raising efforts primarily on non-revenue activity. Further, it is much easier to increase charges in order to meet the demand for increased services. This is particularly true where there is established and independent authority such as a water authority or power authority with the right to increase charges. Any increase in charges is, of course, made in the name of the authority not by Government. Similarly, Government would not be directly concerned in collection of charges. This takes the pressure off politicians who must run for office. Normally a Public Utilities Commission is established which investigates request for increased charges and makes the final decision.

The first step in public finance development should be to place activities which are essentially revenue producing under a private or independent authority operating basis so that all or at least a major part of the financing needs can be met by the activities themselves. This approach is common in the free enterprise or mixed economies.

If Western Samoa is successful in accomplishing this first step, then it can concentrate its limited internal and borrowed capital on those activities that are essentially non-revenue producing such as education, health and non-revenue producing infrastructure projects.

Capacity to Borrow

Following in Table XLVI are the loans made by Western Samoa and the commitments for repaying these loans:

TABLE XLVI

LOAN COMMITMENTS BY WESTERN SAMOA

Amount	Interest Rate	Lender	Date Due	Principal Paid on Due Date	Principal Due
1. £ 406,600	5¼%	N.Z.	15.8.74	£135,000	£271,600
2. 593,400	5¼%	N.Z.	15.8.84	365,000	228,400
3. 78,640	5¼%	National Loan	15.4.69	35,407	43,233
4. 171,360	5¾%	" "	15.4.74	77,159	94,201
5. 75,000	5½%	N.Z.	1973	75,000	—
£1,325,000				£687,566	£637,434

The amortization schedules established for the first four loans will account for only slightly more than half of the principal due. Thus in August 1974, £271,600 in principal will be due on the New Zealand harbour loan. In that same year in April, some £94,201 in principal will be due on the national loan or a total of £365,801 in that year. This amount is legally payable and unless refinancing of such loans is undertaken this amount will be needed to retire the principal due. Similarly in 1969 an amount of £43,233 will be due on one of the national loans and in 1984 an additional £228,400 will be due on the harbour loan.

It is clear that refinancing of these loans will be needed since Government reserves are not expected to grow large enough so that the principal amounts due can come from that source.

Table XLVII compares the agreed on amortization schedule for principal and interest with an amortization schedule which would retire the £1 million (loans of £406,000 and £593,400) when due. It will be noted that under the present amortization schedule when the first part of the loan is due in 1974, only £135,000 of the £406,600 principal due will have been paid. Again if the present amortization schedule is followed only half of the total principal of the loan will have been paid by 1984 when the second loan is due.

TABLE XLVII

COMPARISON OF PRESENT AMORTIZATION SCHEDULE WITH AMORTIZATION SCHEDULE TO RETIRE £1MILLION NEW ZEALAND HARBOUR LOAN WHEN DUE

Present Amortization Schedule				Amortization Schedule to Retire Loan When Due
Year	Interest	Sinking Fund	Total	Principal and Interest
1965	£52,500		£52,500	£101,930
1966	52,500		52,500	101,930
1967	52,500	£12,500	65,000	101,930
1968	52,500	12,500	65,000	101,930
1969	52,500	15,000	61,500	101,930
1970	52,500	15,000	67,500	101,930
1971	52,500	20,000	72,500	101,930
1972	52,500	20,000	72,500	101,930
1973	52,500	20,000	72,500	101,930
1974	52,500	20,000	77,500	101,930
		£135,000 a)		
1975	31,153.10	25,000	77,500	48,629
1976	31,153.10	25,000	56,153.10	48,629
1977	31,153.10	25,000	56,153.10	48,629
1978	31,153.10	30,000	61,153.10	48,629
1979	31,153.10	30,000	61,153.10	48,629
1980	31,153.10	40,000	71,153.10	48,629
1981	31,153.10	40,000	71,153.10	48,629
1982	31,153.10	40,000	71,153.10	48,629
1983	31,153.10	50,000	81,153.10	48,629
1984	31,153.10	55,000	86,153.10	48,629
	£836,535	£500,000 b)	£1,336,535	£1,505,590 c)

a) £271,600 will be due 15 August 1974. The difference between the £135,000 principal paid and the £406,600 due.
b) An additional £500,000 in principal is due on 15 August 1984.
c) The entire loan is retired.

The right hand column of Table XLVII shows the actual payments that would have to be paid in order to amortize both principal and interest when both the £406,600 loan is due in 1974 and the £593,400 loan is due in 1984. The difference between the legal payment of £52,500 for 1965 and 1966 and the £101,930 payment would, of course, have to be made up if this schedule is followed.

The amortization schedule to retire the £1 million when it is due will require annual payments of £101,930 through 1974 and annual payments of £48,629 from 1975 through 1984. The total payment of £1,505,590 under this schedule will retire the loan on the dates due. At the present amortization schedule an amount of £1,336,535 will have been paid. but only half of the loan will have been retired by 1984.

Obviously, both parts of the £1million harbour loan must be refinanced. If the remaining principal due on 15 August 1974 was refinanced for an additional 10 years and the same approach was taken for the remaining principal in 1984, both at the current interest rate, then the comparison of such an approach to the schedule retiring the loans when due would be as shown in Table XLVIII.

TABLE XLVIII

COMPARISON OF AMORTIZATION OF PRINCIPAL AND INTEREST

£1million Harbour Loan

REFINANCING ON PRESENT TERMS TO RETIRING LOAN WHEN DUE

Year	Refinancing on Present Terms	Retirement of Loan When Due
1965-1974	£ 665,000	£1,019,300 b)
1975	88,480	48,629
1976	88,480	48,629
1977	88,480	48,629
1978	93,480	48,629
1979	93,480	48,629
1980	103,480	48,629
1981	103,480	48,629
1982	103,480	48,629
1983	113,480	48,629
1984	118,480	48,629
1985-1994 a)	305,960	
	£1,965,760	£1,505,590

a) Ten equal annual instalments of £30,596

b) Ten equal annual instalments of £101,930

It will be noted in Table XLVIII that amortization of principal and interest in refinancing the harbour loan on present terms with ten year extensions will total £1,965,760 while a schedule to amortize this loan when due results in a total of £1,505,590 in principal and interest. The difference is an additional £460,170 in interest that would have to be paid if present loan terms are extended.

In addition to the question of the considerable additional payment that would have to be made if the loan is not paid when due there is the question of the effect of additional borrowing on the two approaches. There is little question that additional public capital investment funds are needed. With prudence additional funds can be borrowed.

Prudent measures include: the seeking of low interest rates, a long amortization period and a moratorium on the payment of principal and interest until the nation is better able to make such payments. The moratorium would take into consideration (a) the extent of payments that must be made on present obligations and the fitting of additional loan payments in such a way that annual, as well as five year incremental payments, are not excessive; and, (b) the initiation of payments on additional borrowings when development efforts result in increased revenues which in turn can be used to support a heavier debt obligation.

It can be seen from Table XLVIII that if a moratorium on payments is extended to 1975 then the nation would be in a better position to take on additional loans if its major loan of £1million is amortized when it is due rather than to extend the present loan terms. This, of course, means a heavier annual payment in the initial years. On the other hand if additional loan (s) are made with a moratorium until 1975, then the nation will have considerably more public capital for investment at its disposal right away with a much lower annual payment when the payments for additional borrowing begin. In effect it is a balancing out of amortization payments for current and future obligations in the acquisition and use of development capital. The alternative is not to borrow any more or to borrow very little until the economy is ready. This approach is unlikely considering the pressure based on an increasing need from the various social services and infrastructure segments of the community.

Care should be taken that the substantive fields properly think through their needs (plan) over at least a five year period (some activities such as power and telephone development need much longer periods) before commitments from borrowed funds are made. Unless this is done the nation can commit itself to projects which are voracious in their appetite for consuming invested capital and do not return benefits to the nation commensurate with their cost, i.e. cost benefit ratio.

Western Samoa has borrowed £1,325,000. It is assumed that Western Samoa, at this stage can borrow no more than £1.5million in addition to what is needed for the approved five year development programme. Even this amount should not be borrowed without a favourable interest rate, a long moratorium on payback and a long amortization period.

What would the debt obligations picture with the borrowing of an additional £1.5million look like if (a) current loans which cannot be paid on due dates are extended on the same terms and (b) if current loans are amortized so that they are paid when due.

Table XLIX (p. 110) shows the schedule of amortization of principal and interest for (a) existing loan commitments £1,325,000; (b) the additional funds needed for projects approved in the five year development plan budget — £204,000 and (c) the borrowing of an additional £1.5million for public development.

Table XLIX shows the £1million harbour loan from New Zealand as refinanced at the present rate of interest with the 1974 remaining principal due extended to 1984 and the 1984 principal due extended to 1994.

The principal due on the 10 year national loan is shown as being refinanced from the due date in 1974 for an additional 10 years. Similarly the principal due on the five year national loan is shown as being refinanced for another five years at the same interest rate.

The amortization schedule established for the £75,000 hurricane rehabilition loan will amortize both principal and interest over a five year period.

The £204,000 loan for the five year plan budget is the anticipated amount needed over and above that which can be provided out of general government revenues. The schedule is primarily based on the anticipated annual need throughout the five year development programme period. An interest rate of 4% per annum is assumed.

The £1.5million loan also assumes an annual interest rate of 4%. Every effort should be made to obtain a lower interest rate. (More than half of the bilateral aid now given is at less than 3% per annum.) It is also assumed that a moratorium will be obtained until 1975.

As shown in Table XLIX the extension of present loan terms for an additional 10 years will result in the amortization period being extended through 1994. Amortization of principal and interest will total £1,965,760 or 196% of the principal. In other words some £965,760 will have to be paid in interest under this schedule.

National Loan 1 will have a payback of £297,243 or 173% of the principal of £171,360. National Loan 2 of £78,640 will have a total amortization of £109,055 some 139% of the principal.

The £75,000 New Zealand rehabilitation loan will have a total amortization of £86,615 or 115% of the principal.

The £204,000 borrowed for projects approved in the five year plan budget will have a total payback, under this schedule of £251,510 or 123% of the principal.

TABLE XLIX

BORROWING OF ADDITIONAL £1.5 MILLION WITH PRESENT AMORTIZATION SCHEDULES EXTENDED ON EXISTING LOANS

Year	New Zealand Harbour £1,000,000 @ 5¼%	National Loan 1 £171,360 @ 5¾%	National Loan 2 £78,640 @ 5¼%	New Zealand Rehab. £75,000 @ 5½%	5-Year Plan £204,000 @ 4%	£1.5 million £1,500,000 @ 4%	TOTAL £3,029,000
1965	52,500	17,975	7,855				77,830
1966	52,500	17,975	7,855				77,830
1967	65,000	17,975	7,855				90,830
1968	65,000	17,975	7,855		9,370		100,200
1969	67,500	17,975	7,855	17,323	14,425		135,078
1970	67,500	17,975	13,956	17,323	20,836		137,590
1971	72,500	17,975	13,956	17,323	25,151		146,905
1972	72,500	17,975	13,956	17,323	25,151		146,905
1973	72,500	17,975	13,956	17,323	25,151		146,905
1974	77,500	8,988	13,956		25,151		125,595
1975	88,480	12,648			25,151	110,370	236,649
1976	88,480	12,648			25,151	110,370	236,649
1977	88,480	12,648			25,151	110,370	236,649
1978	93,480	12,648				110,370	216,498
1979	93,480	12,648				110,370	216,498
1980	103,480	12,648				110,370	226,498
1981	103,480	12,648				110,370	226,498
1982	103,480	12,648				110,370	226,498
1983	113,480	12,648				110,370	236,498
1984	118,480	12,648				110,370	236,498
1985	30,596					110,370	140,966
1986	30,596					110,370	140,966
1987	30,596					110,370	140,966
1988	30,596					110,370	140,966
1989	30,596					110,370	140,966
1990	30,596					110,370	140,966
1991	30,596					110,370	140,966
1992	30,596					110,370	140,966
1993	30,596					110,370	140,966
1994	30,596					110,370	140,966
TOTAL AMORT.	£1,965,760	£297,243	£109,055	£86,615	£251,510	£2,207,400	£4,917,583
% AMORT. TO PRINCIPAL	196%	173%	139%	115%	123%	147%	162%

The £1.5million loan is amortized in equal annual instalments of £110,370 for a twenty year period beginning in 1975. Total amortization will equal £2,207,400 or 147% of the principal.

Existing and anticipated loans equal £3,029,000. Total amortization would equal £4,917,583 or 162% of the principal borrowed. This results in interest payments of £1,888,583 - 62.3% of the principal borrowed.

Table L includes schedules for the New Zealand harbour loan, and the two national loans which would retire these loans when due.

TABLE L

£1.5MILLION LOAN WITH AMORTIZATION SCHEDULES TO PAY BACK EXISTING LOANS WHEN DUE

YEAR	New Zealand Harbour £1,000,000	National Loan 1 £171,360	National Loan 2 £78,640	New Zealand Rehab. £75,000	5-Year Plan £204,000	£1.5 Million £1,500,000	TOTAL £3,029,000
1965	101,930	23,009	17,789				142,728
1966	101,930	23,009	17,789				142,728
1967	101,930	23,009	17,789				142,728
1968	101,930	23,009	17,789		9,370		152,098
1969	101,930	23,009	17,789	17,323	14,425		174,476
1970	101,930	23,009		17,323	20,836		163,098
1971	101,930	23,009		17,323	25,151		167,413
1972	101,930	23,009		17,323	25,151		167,413
1973	101,930	23,009		17,323	25,151		167,413
1974	101,930	23,009			25,151		150,090
1975	48,629				25,151	110,370	184,150
1976	48,629				25,151	110,370	184,150
1977	48,629				25,151	110,370	184,150
1978	48,629				15,781	110,370	174,780
1979	48,629				10,726	110,370	169,725
1980	48,629				4,315	110,370	163,314
1981	48,629					110,370	158,999
1982	48,629					110,370	158,999
1983	48,629					110,370	158,999
1984	48,629					110,370	158,999
1985						110,370	110,370
1986						110,370	110,370
1987						110,370	110,370
1988						110,370	110,370
1989						110,370	110,370
1990						110,370	110,370
1991						110,370	110,370
1992						110,370	110,370
1993						110,370	110,370
1994						110,370	110,370
TOTAL AMORT.	£1,505,590	£230,090	£88,945	£86,615	£251,510	£2,207,400	£4,370,150
% AMORT. TO PRINCIPAL	150%	153%	113%	115%	123%	147%	144%

The amortization of principal and interest for: (a) the New Zealand harbour loan will total £1,505,590 - 150% of the principal; (b) National Loan 1 - £230,090 - 153% of the principal; national Loan 2 - £88,945 - 113% of the principal.

The New Zealand rehabilitation loan, the five year plan loan and the £1.5million loan are all amortized as in Table XLIX.

The total amortization cost on the £3,029,000 borrowed is £4,370,150 or 144% of the principal.

The primary purpose for this comparison is to (a) show the difference in debt service cost between the two approaches and (b) to compare the annual and five year incremental cost of servicing such debt so that the plan for borrowing will permit government to take on additional debt, with the least strain.

As for the difference in overall burden by retiring the existing loans when due some £547,433 in interest will be saved.

In terms of the annual and five year incremental debt service impact this can better be seen by comparing the total annual cost columns of the two tables as shown below:

Year	Extension of Existing Loans £3,029,000	Five-Year Debt Service Cost	Payments of Loans on Due Dates £3,029,000	Five-Year Debt Service Cost
1965	77,830		142,728	
1966	77,830		142,728	
1967	90,830		142,728	
1968	100,200		152,098	
1969	125,078		174,476	
1970	137,590	531,528	163,098	775,128
1971	146,905		167,413	
1972	146,905		167,413	
1973	146,905		167,413	
1974	125,595		150,090	
1975	236,649	802,959	184,150	836,479
1976	236,649		184,150	
1977	236,649		184,150	
1978	216,498		174,780	
1979	216,498		169,725	
1980	226,498	1,132,792	163,314	876,119
1981	226,498		158,999	
1982	226,498		158,999	
1983	236,498		158,999	
1984	236,498		158,999	
1985	140,966	1,066,958	110,370	746,366
1986	140,966		110,370	
1987	140,966		110,370	
1988	140,966		110,370	
1989	140,966		110,370	
1990	140,966	704,830	110,370	551,850
1991	140,966		110,370	
1992	140,966		110,370	
1993	140,966		110,370	
1994	140,966	563,864	110,370	441,480
	£4,917,583		£4,370,150	

It will be seen that for the five year period between 1966-1970 the debt service cost with the extension of existing loans would be £531,528 compared to a cost of £775,125 with the schedule amortizing loans when due. In addition some time up to 1974 the difference between the present scheduled cost for 1965 of £77,830 and the adjusted cost of £142,728 or £64,898 will have to be paid.

The five year incremental cost between 1971 and 1975 shows a slightly higher cost on the schedule retiring costs when due £836,479 vs £802,959. After this period the debt service cost on the extension of existing loans is consideably higher than the schedule retiring the loans when due. For the five year period 1976-1980 the debt service cost is £1,132,792 for the schedule extending existing loans compared to £876,119 to amortize loans when due. Between 1981 and 1985 it would be £1,066,958 to £746,366; from 1986 to 1990 £704,830 to £551,850; and for the four years 1991 though 1994 it would be £563,864 to £441,480.

For the first five year period, 1966-1970 there would be an additional cost of some £243,600 or an average of £48,720 per year to retire loans incurred when due. It is also true that this would come at a time when government revenues would not be as high (discounting major changes in world prices) as they should be in later years but nevertheless there are distinct advantages in amortizing loans when due. These include:

(a) the saving of £547,433 in interest or 18% of the principal borrowed;
(b) the evening out of the debt service cost;
(c) the ability to incur additional debt for public investment in later years;

It is fairly obvious that the additional amounts shown as being borrowed do not begin to approach the public investment needs of the nation and that Western Samoa will have to incur additional debt to finance this need. By 1981 for example, the coconut and cocoa replanting schemes would have considerably increased production and exports. Other agricultural production and exports would also have been increased. By that time too a thriving visitor industry will have been established as well as a timber industry. The nation will be exporting processed tropical foods and there should also be a growing export garment industry. A relatively small but solidly based secondary industry serving local needs would also have been established.

It is highly probable that by the early 1970's, if not before, considerable additional debt will be incurred to finance public investment projects. Such incurred debt will, no doubt, be based on anticipated revenues. If the nation obtained additional loans for use in the 1970's with payments not beginning until the late 1970's or early 1980's the question of which amortization schedule to use becomes very important. During the 10 year period beginning in 1975, under the extension of existing loans schedule, and lasting through 1984, there is a total annual debt service payment of more than £200,000 per year. During this 10 year period some £2,276,433 in debt service costs will have to be paid under the extension of existing loans schedule - or an average annual payment of £227,640 per year. This compares with the payment of loans on due date schedule which includes a total amortization over the same 10 year period of £1,696,265 or an average annual payment of £169,620 per year.

It will be considerably more difficult to incur additional debt on the extensions of existing loans schedule compared to the schedule which amortizes existing loans when they are due.

It is prudent to arrange for the retirement of existing loans since large sums will have to be paid on the due dates of existing schedules. In addition to saving a very large sum of money the establishment of an amortization schedule to retire existing loans when due will better allow for the making of additional loans for badly needed public investment in the future.

Summary of Recommended Additional Projects to be Financed

The borrowing of an additional £1.5million for public development investment will meet only part of the growing need for capital. For the present, however, it is a maximum amount that should be borrowed. The question of how to best invest these funds in order to obtain the best returns both in the economic sense as well as in the social services and infrastructure fields is not easy to answer. This would be a difficult enough problem even if twice the amount of capital were available. With a limited amount of capital the problem becomes increasingly more difficult.

There is little question that basic economic activity should be stimulated in order to generate the income needed for social services and infrastructure. This in fact was the policy established by Cabinet in the 1965 Economic Plan when the entire investment expenditure was for basic economic activity projects. In the 1966-1970 development budget 73% of the investment expenditure is slated for agriculture, the visitor industry and secondary industry. Only 2·5% of total funds are for health and education.

Although priority has been given to basic economic activity in order to provide employment and income, social services and infrastructure must not be allowed to lag too far behind. If such a lag occurs not only will basic economic activity be inhibited in the short term but some of the basic objectives of economic development included in the scope of social progress such as adequate education and health will be retarted. Most developing countries have made the mistake of pouring too much of available capital investment in non-basic economic activity with the result that large development debt has been incurred without sufficiently developing the economic means to serve that debt. In terms of its allocation of available capital investment funds Western Samoa has not made this mistake but must pull up a bit in the social services and infrastructure fields. A part of any additional borrowed funds should, therefore, be directed to health and education.

Following are estimates of expenditures allocated under 10 categories:

Recommended Allocation of Additional Borrowing for Development

1. Capital for Development Bank	£250,000
2. Cocoa Planting Material Propagation	60,000
3. Road Development, 1st Stage — Apia-Airport upgrading	120,000
4. Development Promotion	10,000
5. Education Development Plan	515,000
6. Visitor Industry infrastructure	14,000
7. Water Supply Development, Faasaleleaga	80,000
8. Rural Health Plan (remaining expenditure)	134,000
9. Village Water Development (WHO /UNICEF participation)	60,000
10. Assistance to power and telephone systems to establish independent authorities	150,000
11. Lefaga Road Upgrading	90,000
12. Salani Bridge Construction	15,000
	£1,498,000

Summary of Purpose

1. Capital for development bank—The need for establishing a permanent development bank has been covered in an earlier part of this section. Agriculture and secondary industry have not been able to increase efficiency, productivity and total output because of a lack of equity capital. Where even a small amount of capital has been available amazing results have been accomplished in agriculture and secondary industry. The injection of equity capital into the community will have manifold positive results. Further, the investment in the development bank is recoverable and should be used to amortize its part of the loan. This will ease the strain by government in amortizing the £1.5million borrowing. A successfully operating development bank has many sources for funds and if successful considerably more than £250,000 can be borrowed directly by the development bank. Operating costs will come out of the loan. The bank should be established as an independent entity with power to borrow funds directly. A project proposal would be prepared by the Department of Economic Development.

2. Cocoa Planting Materials Propagation—The need for a major expansion in cocoa production has been covered in the section on "Agricultural Expansion, Limitations and Land Utilization". Production from the Lafi 7 variety has resulted in a five to six fold increase in production per acre. Large scale increase in propagation facilities is contemplated for the production of Lafi 7 cocoa. Operating expenditure would come out of the normal maintenance budget of the Department of Agriculture. The target projection of government maintenance expenditure in section IX shows a doubling of this vote by 1970. A project proposal would be prepared by the Department of Agriculture.

3. Road Development, 1st Stage, Apia-Airport Upgrading—The Apia-Airport road is the most used road in Western Samoa outside of Apia town environ. A road use benefit analysis (Benefit ratio=

$$\frac{\text{Benefits}}{\text{Costs}} = \frac{\text{Difference in Road User Costs}}{\text{Difference in Highway Costs}}\Bigg]$$

would no doubt show that the greatest benefits would result from the upgrading of this road than any other major road development in the country. Further, this road is beginning to deteriorate because of the volume of traffic. Visitors are impressed with the scenic drive to and from the airport but complain because it is bumpy and uncomfortable. There are several other approaches that can be taken in major road development in Western Samoa.

(1) Contract for construction to a large overseas contracting firm in which case equipment and key overseas personnel would be imported for the project. In order to justify this a commitment would have to be made for future construction of considerably more miles of road than the 20 miles of the Apia-Airport road.

2. The construction of the road by the Public Works Department. There would be a much more flexible approach to future road construction costs if construction is done by Public Works.

3. The encouragement of local contractors to enter in the road construction business. This could ultimately be the least expensive and most efficient approach particularly if competitive contracting firms are established.

The cost estimate for the upgrading of the Apia-Airport road is by the Public Works Department and presumes the construction of the road by the Department.

A project proposal would be prepared by the Public Works Department.

4. Development promotion—This includes travel for personal contact with investors overseas and limited paid space advertising. Western Samoa is virtually unknown. Unless investors are apprised of the opportunities for investment in Western Samoa the nation will not attract the private capital investment needed. A limited programme of development promotion spread over several years will result in the initiation of a necessary effort to attract such capital. A project proposal would be prepared by the Department of Economic Development.

5. Education Development Plan—A plan has been prepared by the Education Development Advisory Committee and approved in principle by the Economic Development Board. The cost of the limited approach is estimated at some £515,000. It includes staffing as well as capital costs.

6. Visitor Industry infrastructure—This primarily includes the development of proper access to Papase'ea Sliding rocks, Papaloloa Falls, Robert Louis Stevenson's Tomb and other places of interest in proximity to Apia. There would also be an effort to eliminate the fale uila and improve airport facilities for visitors. The Department of Economic Development and Public Works would prepare a project proposal. A survey has already been made of places of interest by the staff members of the Department of Public Works and the Department of Economic Development and costs have been estimated.

7. Water Supply Development, Faasaleleaga—Efforts to develop the water supply at Faasaleleaga have been made for a number of years. Studies have been made and some drilling has been attempted. Prior to the 1966 hurricane government had indicated its intention to seek a loan from the Copra Board for the financing of this project. The successful development of water in Faasaleleaga would open up large areas of good agricultural land for settlement. The area also includes a large block of government land. Cost estimates have been made by the Department of Public Works. A project proposal would be prepared by the Department of Public Works.

8. **Rural Health Plan**—The Rural Health Plan project was approved by the Economic Development Board and Cabinet. The fist step of the plan the establishement of a principal medical officer on Savai'i was approved and scheduled to be implemented in 1966. The hurricane caused a postponement and the fist step in the plan was delayed. The five year projected cost of the first step £10,295 is included in the five year development budget. The difference between the total cost of the plan £144,620 and the amount included in the five year development budget is included as a part of the £1.5million loan.

The decision as to where to locate the main hospital on Savai'i has not yet been made. The people of Faasaleleaga have erected a hospital structure at their own expense at Tuasivi in the hope that the main hospital will be located there. The project proposal budget calls for a 50-bed hospital costing £100,000.

If the Health Department is satisfied that the hospital building at Tuasivi is adequate and it is the right location, a considerable saving in project cost can be made. The people of Savai'i do not have adequate medical facilities or attention. It is a long and arduous trip to come to Apia which could be very deleterious to the ill or injured. The rural health plan will considerably upgrade medical services for the people of Savai'i.

9. **Village Water Development**—Many Villages in Western Samoa do not have an adequate water supply. It is estimated that 10% do not have any water while perhaps roughly half have piped water. From the health point of view there are water borne diseases carried in streams which villages used for drinking water. Typhoid and infectious hepatitis are two of the most serious diseases. From the economic development point of view the lack of an adequate supply of water limits the ability of the land to support population and engage in productive agricultural enterprise.

The economic development project titled, "Western Samoa Community Water Supply and School Sanitation Project" is a joint effort by the Government of Western Samoa and the United Nations W.H.O and UNICEF organizations to provide piped water for 10 villages in the Safata District and toilets for the schools in each village. WHO and UNICEF should be approached for joint participation on similar projects with the Government. The amount allocated would be roughly adequate for the total government cost of two additional projects of the Safata type.

A project proposal would be prepared by the Public Works Department in cooperation with the Department of Health and the WHO subregional sanitary engineer in Suva, Fiji.

10. **Assistance to Power and Telephone Systems to Establish Independent Authorities**—The need to establish government revenue producing activities on an independent basis has been covered in an earlier part of this section. It is not possible to meet the capital needs of the power scheme and telephone system. The power scheme in particular demands a tremendous amount of capital which the nation does not have. Nor does it have the capacity to borrow it. It is essential that the power scheme be placed on an independent authority basis or operated on a private basis. As an independent authority it was pointed out that the power authority should be able to raise its own funds for capital and maintenance based on its revenues.

As pointed out, government has made overtures to private telephone companies with a view to generating interest in purchasing and operating the system subject to a public utilities commission in the establishment of rates and services. Some interest has been shown by a large private telephone company. The telephone system must also be either placed on an independent authority basis or run on a private basis in order to obtain the necessary capital for expansion and improvement.

Unless the power scheme and telephone systems are separated from the general obligations of government they will be a capital financial headache that wil plague government, not permit the adequate development of these activities and will severely inhibit other capital improvement needs.

Project proposals would be prepared by the Department of Public Works for the power scheme and the Post Office and Radio Department for the telephone system.

11. Lefaga Road Upgrading—In terms of present and potential traffic, the Lefaga road is a most important artery in the development of the economy. From the point of view of agriculatural as well as visitor industry development, it is important to upgrade this road.

Second to the Apia-Airport road, the traffic generated along this road is probably greater than any other road in the country. The *Visitor Destination Area Program* report recommends the improvement of this road so as to make the west coast more accessible for development.

According to the Public Works Department the some nine miles of road between Leulumoega and the access road at Savaia can be upgraded for the amount set aside for this project.

A project proposal would be prepared by the Department of Public Works.

12. Salani Bridge—There is currently significant banana development on the East Coast of the Island of Upolu. During heavy periods of rain the Le Mafa Pass road is sometimes obstructed. With the completion of the Apia-Siumu Road the eastern and south eastern parts of the island will be more accessible to Apia. The obstruction to access along the southerly road is at Salani where the Salani River sometimes prevents the flow of vehicle traffic. By constructing a bridge at Salani there will be a free flow of traffic along the southerly road with a connection to the Apia-Siumu Road.

A project proposal would be prepared by the Public Works Department.

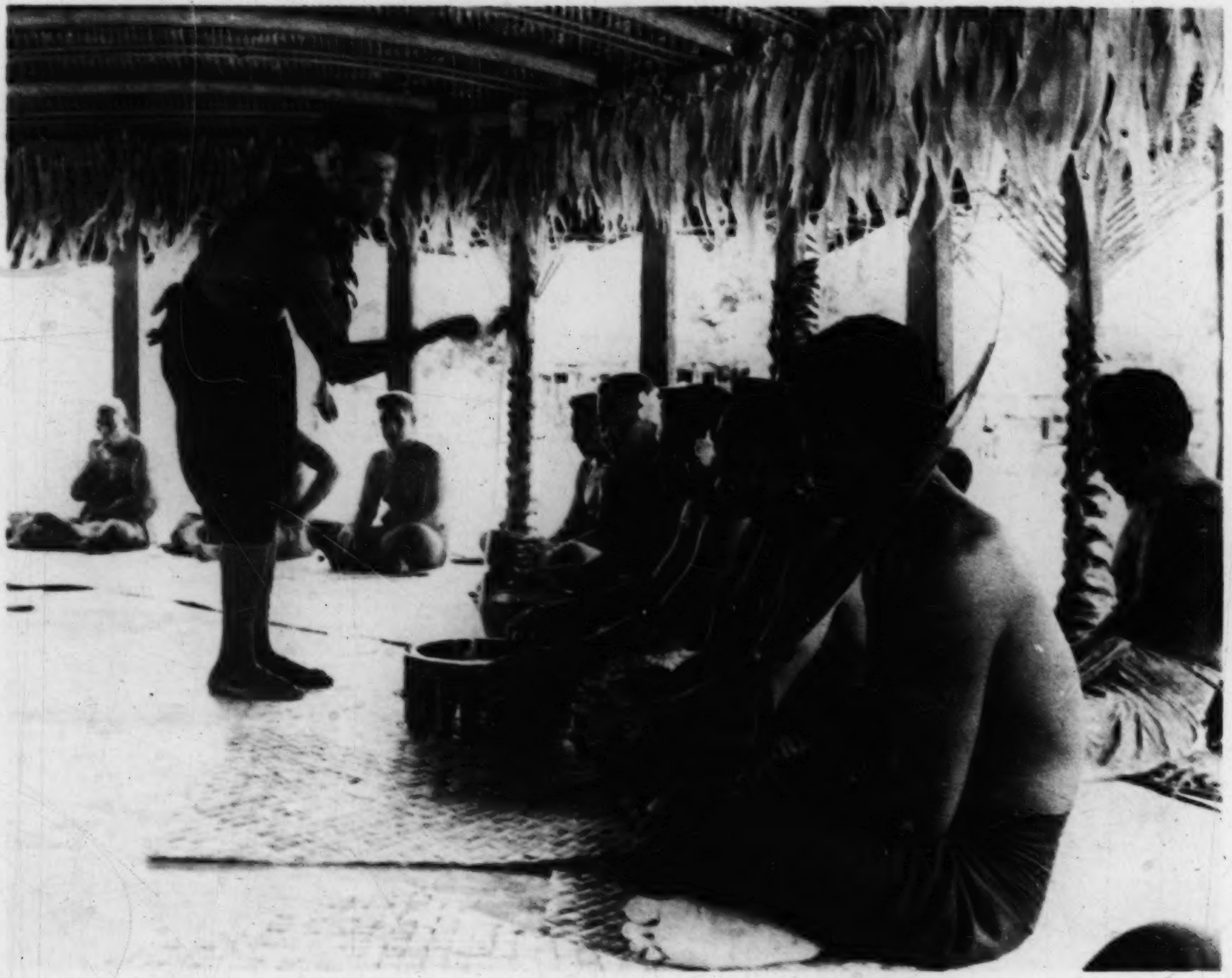
DEPARTMENT OF ECONOMIC DEVELOPMENT STAFF

SEPTEMBER 1966

Director …… ……	**ANDREW GERAKAS**
Assistant Director ……	**EDMUND STEHLIN**
Associate Economist ……	**CORNELIS J. VAN REES**
Development Officer ……	**HANS E. KRUSE**
Development Officer ……	**SA'OLOTOGA LOLESI**
Visitor Co-ordinator ……	**VITO MEISAKE**
Secretary Typist ……	**MRS FRANCES I. MOORE**
Typist …… ……	**MRS ROSE M. MEREDITH**

Neiafu Village, Savai'i.

A Coast Village on Upolu



A Kava Ceremony about to proceed

Visitors participate in Kava Ceremony

Coastal lava flow formation on West Savai'i

"Vailima"—Robert Louis Stevenson homestead now official residence of Head of State

APPENDIX I

PRINCIPLES, FRAMEWORK AND GOALS - 1966-1970 ECONOMIC PLAN

GOVERNMENT OF WESTERN SAMOA
Department of Economic Development
Apia, Western Samoa

25 October 1965

MEMORANDUM for -

Department Heads and
Members of the Economic Development Board's Advisory Committees:

STATEMENT BY GOVERNMENT ON 1966-1970 ECONOMIC PLAN

At its meeting on 20 October 1965, Cabinet established the ... Government's approach to the 1966-1970 Economic Plan. The enclosed statement on "Principles, Framework And Goals - 1966-1970 Economic Plan" outlines this approach.

The philosophy and principles enunciated will be used as a guide by the Economic Development Board and Cabinet in their review and analysis of plans and projects. It will also serve as a guide to the Advisory Committees as they consider projects and other proposals throughout the five-year planning period.

(G.F.D. Betham)
MINISTER OF ECONOMIC DEVELOPMENT
CHAIRMAN, ECONOMIC DEVELOPMENT BOARD

Encl.

GOVERNMENT OF WESTERN SAMOA
Department of Economic Development
Apia, Western Samoa

PRINCIPLES, FRAMEWORK AND GOALS - 1966-1970 ECONOMIC PLAN

Almost every country which has a multiple year economic plan establishes -

1. The principles of its planning process;
2. The framework within which projects and actions are to take place; and,
3. The goals which it hopes to accomplish within the planning period.

Western Samoa must also establish these guidelines and criteria.

Ideally, a statement outlining the principles of planning and of developing goals should be produced early enough to assist those who are contributing to the plan so that they may fit the programmes and projects of the various substantive areas within the philosophy, framework and goals set by Government. Since the 1966-1970 Plan is still in the formative stage, it will still be of value to the Committees, the Department of Economic Development and later to the Board, Cabinet and the Legislative Assembly in attempting to fit the various substantive projects and other recommended actions into an economic plan.

I. Principles of Approach - 1966-1970 Economic Plan:

A. The first principle of planning for economic development is to improve the standard and enjoyment of life of the people of Western Samoa and as a result to offer the opportunity to each citizen to live in dignity and to contribute his maximum talents to the creation and preservation of a strong and free Christian nation.

B. In line with the first principle, it follows that the plans, programmes and projects contained in the plan, must directly and indirectly be of benefit to the people and they shall be judged, accepted and implemented according to a priority which evaluates the emphasis on job and income creating activity.

C. As a small nation, Western Samoa has -

(1) a limited capacity to finance development programmes; and,

(2) to repay overseas aid loans:

(a) it must, therefore, apply itself to a strictly disciplined and balanced approach in the allocation of its resources;

(b) it must accept overseas loans only according to its ability to pay and such loans and aid grants must be applied according to the principles as enunciated in A and B.

D. In order to be of greatest benefit, Western Samoa's Economic Plans must emphasise a practical approach presenting projects that are feasible and which can realistically be implemented.

E. In Western Samoa, as well as throughout the world, plans do not attain their established objectives because of impediments and failures in implementation, and, recognising this, the Government of Western Samoa, through its Administrative processes shall give emphasis to such implementation by seeking and wielding the authority necessary for effective implementation.

II. Frame of Reference - 1966-1970 Economic Plan:

The value and need of social services, physical structures and facilities in the development of Western Samoa are fully recognised, however, it is also recognised that such services and physical development are dependent on basic economic activities for the capital and maintenance outlays necessary for their initiation and operation. It is true that Western Samoa lags behind many countries in the fields of health, education, transportation facilities, communications, government buildings as well as in other areas of human activity. It is impossible, however, for Western Samoa as a small nation, with a very rapidly growing population, to attempt to match and in most cases to even approach the standards of most other countries or to meet the ambitions and objectives of leaders in these substantive fields.

Within the five-year plan period there must necessarily be an emphasis on the job, income and tax revenue creating activity so that the nation can develop new sinews of economic strength which will permit larger expenditures in the social and physical development fields in line with the nation's financial capacity.

It is recognised that even in the short run there is a need for certain physical facilities in order to allow the development of job, income and tax revenue creating activities.

The decision to proceed with the construction of such facilities is to be carefully analysed and it must be proven beyond doubt that the returns in job, income and tax creating activity will benefit the nation more than the cost of the facilities. Such analysis is to take into consideration not only the cost-benefit analysis of the particular project under consideration but it must be proven without doubt that a substitute, less costly, approach cannot be utilised which can provide a better return compared to cost.

In the education field, emphasis must be geared to providing that type of education which will best equip the individual to take his place within the economic and social structure of Western Samoa. Continued assistance should be given to those students who show exceptional talent and every effort should be made to find, counsel and assist such individuals to obtain the type of education which will permit their maximum contribution to the country.

In the health field, emphasis should be given to obtaining the number and quality of medical personnel needed to provide medical and hospital services in line with the nation's basic needs. Where there is competition between the two, expenditures for structures must be sacrificed in favour of obtaining quality personnel.

In all fields, there must be an avoidance of duplication and waste.

Although the nation must invest and allocate its resources in a balanced way and according to its capacity, it is fairly obvious that internal sources are not sufficient to meet the needs of one of the fastest growing populations in the world. Outside sources must be encouraged to invest in and contribute to Western Samoa's development. This can be done in two essential ways:

(1) Overseas aid from national governments and international organisations;

(2) Private investment of overseas capital and technical and management ability.

Both approaches must be pursued with energy and determination.

Overseas aid is sometimes looked at as a panacea - it is not. The basic form of aid today is in loans with near commercial interest rates. Too many developing countries have, in their desire to improve their economies, grasped too quickly and too much of overseas loan aid. As a consequence, these countries have found themselves in severe financial straits and instead of improving their economies, they have found themselves in a more serious economic situation than when they started their development programmes. This situation is slowly being recognised by the aid-giving developed countries and international organisations. There has been an initiation of the no-interest type loan although grant-type aid which was in vogue right after the Second World War is limited.

Western Samoa must profit by the mistakes of many of the developing countries and will not let its ambitions and aspirations cause it to incur development debt which cannot, at least for the most part, be paid back directly or indirectly, by the project for which it has been borrowed.

Private overseas investment in basic economic activity, on the other hand, creates no obligation upon the nation to repay. It creates jobs, income and tax revenues at little or no cost or risk, to government. The fallacy that overseas private investment and know-how exploits the under-developed nation has been disproven throughout the world. The profits that are taken out are usually a very small fraction of the economic gain enjoyed by the nation. This is not to say that Western Samoa has a great many opportunities for overseas investment but where such opportunities are present, as in tropical food processing, fish canning, timber and hotel development, government will encourage such private investment in Western Samoa.

Finally, no development planning is worth its salt without the proper understanding and support of government officials, the Legislative Assembly and the general public. All must realise that economic development does not occur overnight. Western Samoa must not only be united in its purpose and dedicated to its cause - it must also be willing to sacrifice and work hard for the gains that are to be enjoyed in the future.

III. Goals for 1966-1970 Economic Plan:

Economic Development Planning like all organised human endeavour must have goals. The goals established are not always reached but if realistically established and with adequate implementation of projects, they are an attainable aspiration.

The five-year plan shall establish goals to be attained as well as guidelines on the allocation of resources and the limits of expenditures. Accordingly, to the extent possible with limited available statistical information, goals and guidelines shall be established.

APPENDIX II

SELECTED ECONOMIC DEVELOPMENT PROGRAMME PROJECTS

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.

1. Date Submitted: SEPT., 1965

2. Department AGRICULTURE

3. PROJECT TITLE: COCONUT PLANTING AND REPLANTING

4. DESCRIPTION OF PROJECT:

Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: OVERSEAS OFFICER (Coconut Specialist) or S.A.O. TREE CROPS (Local.)

Title in Organization:

6. DURATION OF PROJECT
1. 1. 1966 (Starting Date)
31. 12. 1972 (Completion Date)

7. LOCATION OF PROJECT: SCATTERED SITES IN BOTH ISLANDS.

8. BUDGET SUMMARY

	Government of Western Samoa	Departmental Contribution	OTHER*	TOTAL
Salaries & Overtime Wages	9,860	-	-	9,860
Local Travel*	250	150	-	400
Overseas Travel	-	-	-	-
Office Expenses				
Furniture	-	-	-	-
Publications	300	50	-	350
Plant & Equipment	-	-	-	-
Instruments & Equipment*	17,425	-	-	17,425
Buildings*	-	-	-	-
Contracts*	-	-	-	-
Other* Subsidy & Transport	15,430	100	-	15,530
TOTAL:	43,265	300	-	43,565

* Please furnish additional details as requested in the Instructions.

GOVERNMENT OF WESTERN SAMOA

Department of Agriculture

PROJECT PROPOSAL
ECONOMIC DEVELOPMENT OF COCONUT PLANTING

1. Description of Project:

(a) Need and Background.

The economy of Western Samoa depends heavily on three crops: coconuts, cocoa and bananas. Of these three, copra has been the greatest overseas money earner. As late as 1959, copra accounted for 42 per cent of the total export value, cocoa 29 per cent and bananas 27.5 per cent.

Export production figures for the past ten years are tavulated below:

Table I. Copra Exports (1955-1964)

Year	*H.A.D.	Grades (Tons) **S.D.I.	S.D.2.	Total (Tons)	f.o.b. Value £s.
1955	-	-	-	17,178	1,148,739
1956	1,256	12,160	2,165	15,581	817,494
1957	2,598	2,978	8,748	14,325	811,441
1958	3,827	5,653	4,075	13,731	-
1959	8,442	4,890	3,508	16,840	1,400,000
1960	9,959	2,464	2,110	14,534	989,612
1961	11,122	1,562	1,228	13,912	672,899
1962	8,954	776	953	10,683	654,905
1963	13,881	727	751	15,359	811,422
1964	14,131	489	383	15,003	920,104

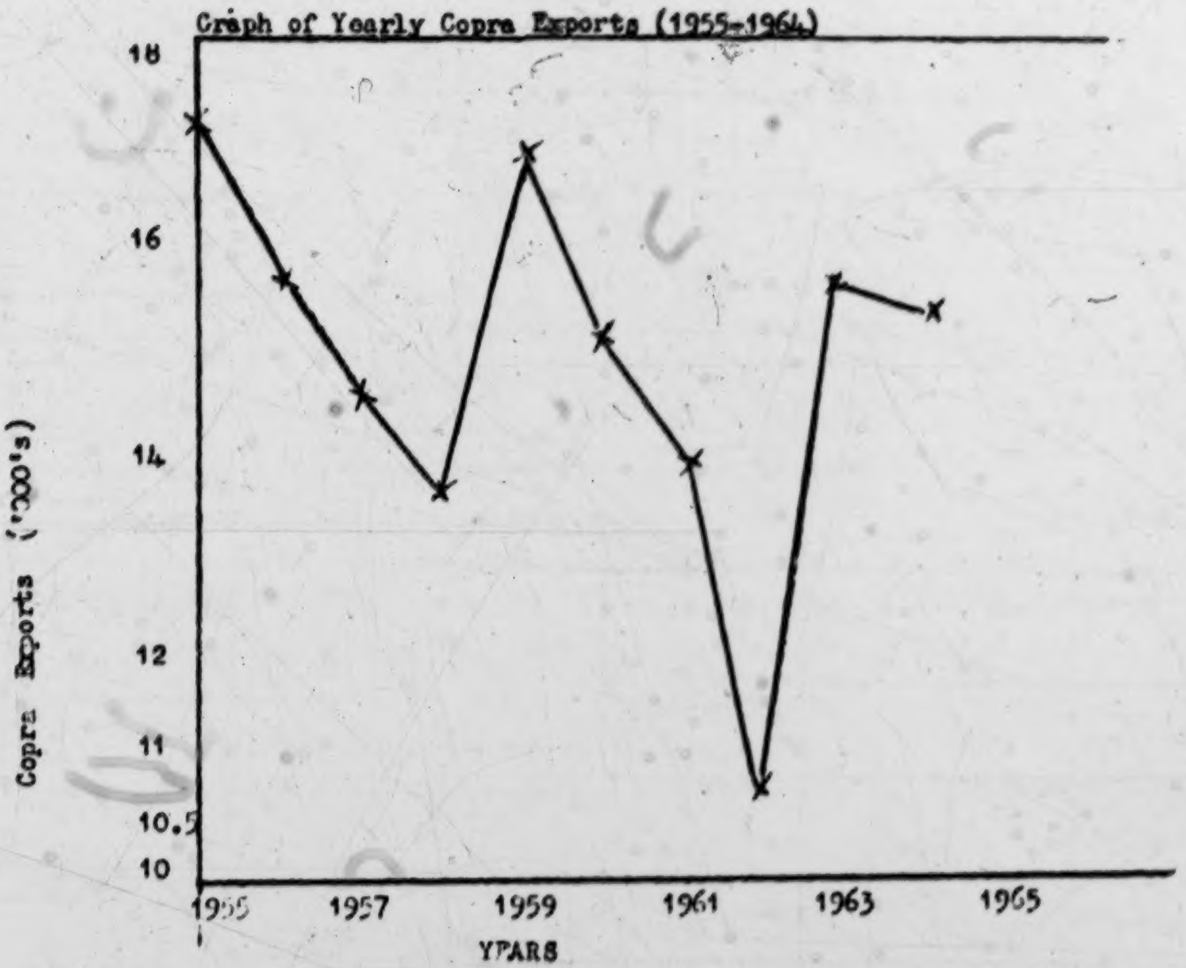
*H.A.D. - Hot air dried.

**S.D. - Sun Dried.

Bordering on and at times exceeding the value of £1,000,000 the Copra industry has potentials for a significant increase. On the world market the demand for copra seems assured as more and more uses is discovered utilising this product which is freed from any threat of replacement by synthetic products. It is not likely to be adversely affected by other oil-producing plants and animals. By-products of the Palm is under investigation by S.P.C. for other extension alternative uses.

The coconut palm is eminently suited to the Samoan's way of life where after the years of establishing the grove, the palms can be easily maintained. Graphically, (see graph below) the copra industry has, ironing out the fractuations been static. When it is considered that 11,017 tons were imported as long ago as 1912, it can be seen that the industry is on the decline. The increase in overseas earnings in spite of static production is partly due to the increase in Hot Air Dried Copra. The systematic scheme for copra processing shall need a separate project.

Graph of Yearly Copra Exports (1955-1964)



The static position tending towards a downward trend of copra export has been attributed to various reasons. Apart from others, coconut as a subsistent crop has been increasingly consumed locally due to rapid expansion of population. Remedial measures to overcome these factors are being undertaken in other Government projects e.g.

(1) Rhinoceros beetle damaging up to 20% (Hinckley 1964) of copra is the centre of investigations by the UNO/SPC Research Unit.

(2) Rat Control Project would also contribute in reducing damage by rats - another major pest of coconut.

(3) General agricultural neglect and weed growth responsible for competition in groves for plant nutrient and water as well as making it difficult to find fallen nuts, has been partly overcome by the Incentives Project.

(4) It is well recognised that even when the above factors are combined, the major cause of the static condition of copra exports has been the lack of replacements and new plantings. Apart from W.S.T.E.C. and a few private endeavours, (e.g. J.B. Fonoti, Togamau Nano in Upolu, Toomata, Tolova'a of Savai'i to cite a few) little attempt has been made to replant. Where the well-intent scheme under the village (matai) authority (pule) (whereby each untitled man is to plant a known quantity of palms at required intervals) has contributed to the number of palms planted, the effect has been

counter-acted due to:-

(a) Lack of selection.

(b) Wrong spacing and no lining out.

(c) Mismanagement during establishment stage. (No care for young seedlings, loss of leaves etc.)

(d) Indiscriminate planting in choosing readily accessible sites rather than suitability.

(e) Extremely mixed and heterogeneous plantings.

These are dominant characteristics of Samoa's plantations that sharply contrast with the orderliness of those in W.S.T.E.C.'s plantings. Remedial measures for these faults do not depend on further research or other technical findings, but may be provided for in the ideas simply put forward by Mr W.V.D. Pieris in his booklet "Wealth from the Coconut" which has been translated into Samoan. Nor are the growers without the "know how" but there is room for controlled replanting and standardisation, in monoculture as much as in possible, and on known practices from years of experience.

Notwithstanding the above factors, a cogent reason for the need of this project is the existence of the source of selected seedlings under the Coconut Nurseries Project - available for replanting. To cater for controlled, orderly planting this project is proposed as an integral part of and an immediate sequence to the Development of Coconut Planting Material.

(b) Objectives:

Capitalising on the ready availability, of selected seedlings at subsidised costs (the Coconut Planting Material Project) this project aims at a controlled replanting (or underplanting and extensive new plantings, along simple approved lines as those put forward by Mr W,V.D. Pieris, thus overcoming any misuse of planting material and haphazard way of establishing coconut plantations. It offers a nominal reward directly to planter in cash and kind for adherence to approved line of coconut establishment. The ultimate objectives of the two projects is one - to increase overseas earnings from a greater output of copra exported, and all its associated manifold benefits leading eventually to an elevation of the standard of living.

For the purpose of this project, a distinction is made between replanting or underplanting and new plantings. The former refers to sites where coconuts exist whilst the latter refer to localities where coconut is introduced e.g. virgin bush, banana land etc.

No recent survey has been carried out to determine an up-do-date census of coconut palms. It is generally accepted that some 55,000 acres are at present in coconut (A.C.S. Wright 1956). It is further estimated that 97,000 acres is the potential area for coconut growing.

Using these figures as a basis the following procedure lead to the determination of a target for this project.

(a) **New Planting**: Estimated Potential Area for Coconut = 97,000

Estimated Area in Coconut = 55,000 acres

Estimated Potential Area for Coconut New Planting = 42,000 "

Chosen Target for new planting over period of seven years - 1966 to 1972 = 21,000 acres or 3,000 acres per year or 250 acres per month.

(b) **Replanting**: To establish a target for replanting, the following sample from the survey of coconuts typify a pattern common in Samoan plantings:

Falealili District (Approx. % of total bracketed)

Village	Non bearing (below 7 yrs.)	Newly Planted	Total New Planting	Unproductive and Overage	Bearing	Total
Sapunaoa	2,756	3,530	6,286	4,007 (18%)	12,169	22,467
Salesatele	1,550	2,446	3,996	2,538 (17%)	819	14,426
Sapo'e	1,571	1,584	3,155	2,938 (26%)	5,378	11,369
Salani	2,567	2,789	5,256	3,777 (20%)	9,614	18,702
Satalo	1,739	1,648	3,387	2,047 (16%)	8,027	13,357
Malaemalu	1,288	1,304	2,592	1,628 (18%)	4,793	8,992
Tafatafa	1,250	1,189	2,439	1,695 (19%)	5,103	9,238
Matautu	2,000	2,285	4,285	3,238 (20%)	9,506	15,896
Vaovai	1,199	1,240	2,439	1,498 (17%)	4,898	8,810
	(3)	(4)	(5)	(1)	(2)	(6)

Average % of Unproductive and Over age Palm = 19%.

This fact does not take into account, the percent of bearing palms that are at the "replantable" stage. Coconut palms retain productive life for some sixty years, and to allow for senile decline replanting should start in the 40 - 70 year old palm groves

33% is chosen initially for replanting in established plantations. This is ⅓ of 55,000 = 18,333 say 18,500 acres over / years 2,600 acres per year or 216 say 220 acres per month.

Total Acreage for New Plantings and Replanting:

	For 7 yrs.	Per Year	Per Month	Seedlings Requirement (60 per acre) Per Month	Year
New Planting	21,000	3,000	250	15,000	180,000
Replanting	18,000	2,640	220	13,200	158,400
	39,000	5,640	470	28,200	338,400

Compared to present expected output of coconut nurseries.

Further requirements are tabulated:

Nursery Output Per Year	Output Per Month	Planting Requirements No. of Seedlings Per Year	Per Month	Further Requirements Per Year	Per Month
200,000	16,666 say 16,600	338,400	28,200	138,400	11,534

The extra 138,400 seedlings per year required would necessitate a further 4 coconut seed nurseries since the six nurseries aim at producing 200,000 seedlings per year each produce about 33,000. It is recommended that 4 extra nurseries be established.

The overall aim is to double the present production when the new plantings and replantings are bearing. This is in spite of the fact that the estimated total area in coconut is not doubled (short of 16,000 acres since only 39,000 acres is to be planted, the total being 55,000 acres) nor will the estimated remaining 42,000 acres maximum for coconut extended planting be fully covered. In the latter 21,000 acres remain for later expansion.

The doubling of production is derived from the following, using 8 cwt. per acre as a conservative estimate for yield from an acre of selected, fertilized palms - (Fiji estimates 10 cwt. for unselected fertilized palms):

Present Export Production = Approx 15,000 tons from
estimated 55,000 acres.

Total acres in New Palms = 39,000 acres.

At an estimated yield of 8 cwt/acre = 15,600 tons.

This at £65/ton = £1,004,000.

From the agronomic viewpoint - detailed in the next section, much of the obvious faults observed in the present plantings could be overcome by much publicity on proven practices recommended for all new plantings. A system of awarding a subsidy for plantings done on approved lines will induce most growers to develop their coconut plantations on a recommended procedure.

(c) Method of Accomplishing:

With a planting goal set at settling 5,640 acres per year (3,000 new planting and 2,640 replanting), requiring 338,400 seedlings consideration must now be turned to how these plantings can be effectively achieved.

In general, coconut agronomy with its recommended improved practices, if dealt with in detail would necessitate a bigger proposal than this to accommodate it. However, it is proposed under (1) that an extensive pamphlet - simply written and well illustrated is to contain comprehensive detail on improved practices, adherence to which would subject growers to receiving the proposed subsidy payments. This pamphlet would obviate the need to include in this project details of proven practices both local and overseas, leading to increasing production of copra. Nor is the urgent need for better copra processing methods included in this proposal. It is contemplated to be of of worth for a separate proposal but its value can never be over emphasised.

A wider scale in coconut rehabilitation also merits separate recognition but could be under the responsibility of the proposed Coconut Specialist. The appointment of such an officer would obviate the needs that this section of the proposal merely outlines as limitations, and must be catered for outside this project proposal.

Briefly, the following procedure should be observed.

(1) Up-grading of Coconut Extension Work. Including production and dissemination of Improved Husbandary Propaganda.

(2) Thinning of Established Coconut Plantations to 80 - 100 palms/acre.

(3) Preliminary survey and screening of applications for New & Replanting Coconuts.

(4) Clearing, Lining Out, and Spacing.

(5) Hole Digging, and Transportation of Seedlings.

(6) Planting, Transport and Application of Fertiliser.

(7) Intercropping and/or Legume Cover Crop.

(8) Subsidy Scheme.

(9) Pre-Bearing Husbandary - Incentives.

(10) Staff Organization & Implements.

(1) Up Grading of Coconut Extension Work - Including Production and Dissemination of Improved Husbandary Propaganda:

There is a very great need in Western Samoa for a good agricultural extension service, the early establishment of which should be given the highest priority. This has been viewed by Messrs Elvins, Lauterbach and Stace, C.S. Wright to mention but a few of the more authoritative ones. However this is widely recognised. Technical advice on coconut production, protection, processing and utilisation has to be taken to the growers most times, since he will seldom come for it, and the men who take it must be so trained and experienced as to be able to speak with authority. This is all the more important as travelling expenses from Savai'i prevents many growers from visiting headquarters in Apia. It is contemplated that the two islands be equally upgraded and all facilities to achieve this be equally devoted to each island.

Staffing:

The re-organisation of the Extension Division now implemented in Upolu - lends itself favourably to the proposed scheme. It is generally feared that for the time being, the one man outposts are each over committed for duties with primary emphasis in Banana Extension. This is in spite of the move to free all field officers from marketing responsibilities.

Recommendation:

It is proposed therefore that to start the project, an overseas Coconut Extension Specialist be employed to train local staff leading to having a local officer trained to take over. The appointment of a Banana Officer is a step towards specialisation in crop growing. It is equally essential that a specialist for Tree Crop be appointed from Overseas pending qualification and availability of a suitable qualified local officer.

Recently in Fiji, the post of Senior Agricultural Officer Tree Crops was created to cope with expanded work on tree crops principally coconut and cocoa. A few avenues are suggested for this post:

(1) A replacement for the Extension Expert from F.A.O. to undertake Tree Crop Development.

(2) An officer released from overseas research institutes, perhaps Ceylon.

(3) Through SPC to the Research Centre at Rangiroa (Tuamotu Is.)

As a Government member of the Commission and as the latter contributes regularly to this Coconut Research Stations, there might be the possibility of acquiring technical assistance at relatively low cost to the Government.

When considering that there is a dire need to increase the revenues and overseas earnings, and there is relative soundness in marketability of copra, it is felt that the capital required for the initial outlay and provisions for continuance be made available and assured for purposes in the proposal.

The training of local staff and initial implementation of the project should take 1 (one) year and the following levies of staff are preliminary requirements.

Coconut Specialist (S.A.O. Tree Crops)

UPOLU — SAVAI'I

1 Senior Coconut Officer(Upolu) — 1 Senior Coconut Officer(Savaii)

Minimum requirement of Agriculture Diploma unless an experienced officer in departmental work.

10 Coconut Assistants — 5 Coconut Assistants

Ex Avele graduates with at least two years of practical experience.

These are to be connected to the Extension Outposts where coconut nurseries are presently located, but have specific duties.

In addition, the present Clerical staffing for the nurseries should have extended duties to include recording work and general administrative responsibilities of the Coconut Project Staff.

A pamphlet similar to Pieris "Wealth from the Coconut" be produced from information to be collected and compiled by the Coconut Specialist - outlining approved practices covering the period from Nursery Management to Marketing.

(2) Thinning of Established Coconut Plantations:

The operation of thinning coconuts is necessary in established plantations where correct spacing has not been observed and particularly where coconuts are self sown and allowed to germinate in situ. In National Campaigns of Coconut Improvement & Rehabilitation, this practice is a pre-requisite to replanting and general improvement. A reference here is made to the work of [1] Mr V.W.D. Pieris in the Island of Samui (South Thailand),

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[1] Report on a Tour in South Thailand - with Particular Reference to Coconut Improvement on the Island of Samui - FAO Publications.

[2]the Kingdom of Tonga, [3]the Trust Territories where this practice is advocated. The Burn's Commission and [4]Lord Silsoe's Report also outlines benefits from the practice of thinning. Finally a reference to the work of [5]D.J. Meadows.

Briefly, the benefits of such an operation is the relieving of the intense competition for water, available plant nutrient, and sunlight for more productive use.

The thinning operation could be achieved by declaring that groves carrying more than 100 palms to the acre be thinned down. Eligibility for replanting would be limited to thinned down areas to the required 80-100 palms to the acre.

There is evidence that in present coconut groves, there are areas where coconuts are thickly cultivated sufficient to warrant this work.

Clearance of fallen logs in keeping with the Rhinoceros Beetle Ordinance should be the responsibility of the Rhinoceros Beetle Control Units.

(3) Preliminary Survey & Screening of Applications for New & Re-Planting of Coconuts:

A systematic approach is necessary when nursery outputs are released for planting out. On the other hand the system has to be formulated as by planters. A controlled programme of seedling issue, must in the first instance be controlled to ensure close adherence to recommended procedures required for successful and productive Coconut Plantation Establishment.

Though seemingly there seems to be much known about coconut planting through experience and tradition, little is ascertained in issues such as limit of elevation for economic production. Technically, a proposal for research work on Coconut Improvement involves some 10 years a minimum period - before constructive results can be derived. There is sufficient results from established overseas coconut research to carefully screen practices that are productive for use here. Not only must there be a protection against highly elevated planting sites, but against locations proned to Rhinoceros Beetle attack and not suited agronomically. The worth of mixed cropping needs further looking into. Moreover, there is a tendency towards indiscriminate planting in locations where other home crops (vegetables and local food crops) might be more aptly cultivated. (A coconut palm once established will remained for a minimum of 70-80 years). All these factors could be overcome if applications are sent in and a screening survey is carried out as to suitability of land for plantation sites.

[2] "Coconut Improvement in the Kingdom of Tonga" - FAO.

[3] "The Rehabilitation of the Coconut Industry in the Palau District".

[4] "Report of the Fiji Coconut Industry Survey" - Lord Silsoe in the Gilbert & Ellice Island outlines the use of chemicals in destroying old, unproductive and over crowding palms effectively and reasonably economical.

[5] "Coconut Grove Improvement in the Gilbert & Ellice Islands with reference to the application of the results of I.R.H.O. Research" - D.J. Meadows.

The following district production figures are quoted as a general guidance to replanting and copra productivity:

Copra Production in District:*

	1964	1963
Aleipata	T 865	(T1020)
Lepa & Lotofaga	753	(806)
Safata	878	(971)
Lefaga	495	(536)
Faleata	138	(202)
Gagaemauga	602	(766)
Gagaifomauga	705	(802)
Vaisigano	187	(219)
Satupaitea	309	(445)

The remaining 11 districts showed increases in production, the first six districts, on a percentage basis of increase:

Faasaleleaga	-	31% up over 1963
Vaimauga	-	30% " " "
Fagaloa	-	21% " " "
Falealili	-	17% " " "
Aiga-ile-tai	-	17% " " "
Palauli	-	12% " " "

Copra production of Western Samoa Trust Estates Corporation at 1480 tons remained at about the same level as the previous year, which was 1486 tons.

Note: The schedule does not include copra which might have been held at plantations or district trading stores.

Copra Production in Upolu & Savai'i *

The schedule shows production in grades and quality of copra produced in Upolu and Savai'i, with the Western Samoa Trust Estates copra shown separately.

Hereunder is summary in totals:

	1964	(1963)	(1962)	(1961)
Upolu	49%	(50%)	(53%)	(48%)
Savaii	42%	(39%)	(36%)	(40%)
	91%	(89%)	(89%)	(88%)
W.S.Trust Estates	9%	(11%)	(11%)	(12%)
	100%	(100%)	(100%)	(100%)

Savai'i production showed improvement of 3% over 1963, 6% over 1962, 2% over 1961.

Upolu (excluding WSTEC) was down 1% over 1963, 4% over 1962, but 1% up over 1961.

*Annual Report of the Copra Board, 1964.

In encouraging replanting in more productive districts - some degree of specialisation in crops can be achieved.

Additional factors that could be encouraged during this preliminary stage is large scale plantings and restrict where possible to a monoculture.

(4) Clearing, Lining Out, an[illegible]acing:

After clearing the land, lining out is a practice recommended to mark each hole ensuring orderly planting and correct spacing.

Mr V.W.D. Pieris commented on planting distance in Samoa:-

> "Spacing of coconut is governed by the patterns of land use in each area.
>
> Where coconut is a monoculture, combined with pasture and cattle or otherwise, spacing should never be less than 27 feet or more than 28 feet on the square, giving 60 palms and 55 palms per acre, respectively.
>
> Where, as in Samoa, mixed cropping is the rule, especially on smallholdings, spacing of palms should not be less than 30 feet and, perhaps, not more than 33 feet on the square. I say "perhaps", because we know very little about spacing of coconut in the presence of intercrops, but we do know that the correct spacing for palms in monoculture must allow 729 to 784 square feet (27 to 28 feet square) ground area to each palm. Under good conditions and on loose soil, a coconut palm will produce more than 5,000 roots radiating from the base of the palm, which are capable of travelling 40 to 60 feet laterally".

This is clearly outlined and should set the required pattern for Samoan pre-planting preparation.

(5) Hole Digging & Transportation of Seedlings:

Whereas recommended size of holes is stated differently in the booklet "Wealth from the Coconut" - the author now personally recommends holes of the dimensions 3' x 3' x 3' for better rooting and general establishment.

A nominal cost of 1d. per seed nut is charged to growers and it is recommended that Department provides transport cost to overcome any discouraging and excessive costs to growers and to ensure sound and undamaged transit of seedlings. There are advantages of digging the holes and left to 'weather' for 2-3 weeks before planting and this is recommended.

(6) Planting, Transport and Application of Fertilizers:

Planting Out is detailed in "Wealth from the Coconut".

Fertiliser is an expensive item in coconut husbandary. Nevertheless, it is estimated that in Fiji - fertilised groves produced twice as much copra than those not fertilised. (a difference between yields of 5 cwt. not fertilised and 10 cwt. of dried copra fertilised).

Fertiliser recommended by the Department resulting from work at Nafanua Agricultural Station consists of the following fertilisers - expressed in weight ratio and not N: P_2O_5: K_2O.

20 parts S/Ammonia (20.5% N.)

20 parts Superphosphate (18.0% P_2O_5)

30 parts Muriate of Potash (60% K_2O)

This mixture costs 5d per pound (lb) and allowing 1d. for mixing costs would total 6d. per lb.

The recommendation is to apply $\frac{1}{2}$ lb/palm 4 times a year.

For the initial year however only two applications would be necessary as planting commences half way through the year when nurseries can turn out suitable planting material.

2½lb. application = 1lb. per palm costs 1/- or
60 palms/ac. = 60/-/ac. for
5,640 acres @ £3 per acre
= £16,920 for the first year.

Annually, however, fertilizer costs at full rate of application would total £33,840 for each annual planting of 5,640 acres.

Recommendation:

That fertilizer be supplied mixed and delivered to the growers free of cost. Application labour is to be supplied by growers under the supervision of Project Staff.

Intercropping and/or Legume Cover Crop:

During the initial years of establishing - some 5 to 7 years - intercropping should be encouraged. Primarily, it is a source of income for the years awaiting bearing of nuts. Other effects include inducement to keep down weeds, to cultivate the soil and more regular checking of the young coconut seedlings.

Legume cover crop has been overlooked in coconut cultivations in Samoa except where pastures are mixed with cattle ranching. Its benefits are, the keeping down of weeds; preservation of soil moisture and addition of organic matter and nitrogen. Where eroding conditions prevail, conservation of the soil. The success of W.S.T.E.C. Kudzu cover crop under coconuts in Vaitele is a leading example.

Recommendation:

That the Coconut Specialist incorporates in his work recommendations for intercropping and suitable cover crop.

(7) Subsidy Scheme:

Coconut replanting and improvement Schemes are in operation in countries already mentioned. Subsidies to participants, either in cash or kind or both are given in all those countries. Cash subsidies are given in a nearby case, in Fiji.

Mention has already been made of subsidies offered in kinds - viz. coconut seedlings at 1d, fertilizer, advisory and extension services etc.

It is proposed however that cash subsidy be paid to growers who develop their replantings and new plantings in accordance with regulated widely publicised procedures. Cash is a luring incentive to an economy where transitory phases is undergoing a change from a subsistent to a cash one.

A differentiation is made for scales of planting. A minimum of 3 acres is required for planting out. For small holdings - 3 to 10 acres. For larger scale holdings - 10 acres and above.

To provide an incentive for bigger scale plantings, a differential payment of 10/- per acre is introduced between small and larger scale holdings.

To induce more new plantings an additional £2 is paid out as subsidy payment towards clearing (average cost of clearing land in Samoa is £6 per acre), of small holdings and £3 clearing of large scale plantations.

Hence, the following is a summary of categories of plantings and subsidy payments.

Description	**Amount** (per acre)
Category IA.	
Small Holding New Planting 3 - 10 acres.	£2 for clearing 30/- per acre per year for maintenance. Total £3.10.0. for first year.
Category IB.	
Small Holding Replanting 3 - 10 acres.	30/- per acre per year.
Category II A.	
Large Scale New Planting (10 acres or more)	£3 for clearing per acre. £2 per acre per year for maintenance. Total £5 for first year.
Category II B.	
Large Scale Re Planting (10 acres or more)	£2 per acre per year.

Hence on a per acre basis, total payments per acre for the 7 years of establishing and before production, for the 4 categories are as follows:

Description		**Total Subsidy** (per acre)
Category I A. (Small scale New Planting)		
Clearing	£2	
Maintenance 30/- per year for 7 years.	£10.10.0.	£12.10. 0.
Category I B. (Small scale Replanting)		
Maintenance 30/- per year for 7 years.	£10.10.0.	£10.10. 0.
Category II A. (Large Scale New Planting)		
Clearing	£ 3. 0.0.	
Maintenance @ £2/yr. for 7 years.	£14. 0.0.	£17. 0. 0.
Category II B. (Large Scale Replanting)		
Maintenance £2/yr. for 7 years.	£14. 0.0.	£14. 0. 0.

For the first year and using the annual target of 5,640 acres the following procedure gives an anticipated total amount of expenditure as Subsidy Payments -

Category	Cost/Acre	Total Acres (Estimated)	Total Amount Estimated/Yr.
IA	£3.10. 0.	1,000	£3,025
IB	£1.10. 0.	1,000	£1,025
IIA	£4. 0. 0.	2,000	£8,000
IIB	£2. 0. 0.	1,640	£3,280
			£15,330

To encourage as much as possible a fair reward direct to those who pay labour or provide the labour input for coconut planting the project should pay subsidies to individual landowners. The exception might be the development of communal village land on acceptable terms with the Agriculture Department verified by the Lands Department as to land entitlement.

Essentially, subsidy payments are to be made after the work is done and approval is made.

(8) Pre-Bearing Husbandary - Incentives:

The 7 year period before any returns can be expected involves maintenance work consisting of weeding, fertilizer, pest and disease control, replacements of seedlings not survived and general field husbandary. Part of the costs is met through subsidy payments and subsidy issued in kinds. This is a very small portion of the total maintenance costs.

The project envisage the use of chemical control. Even with rebate duties for import at 5% level, it is generally felt that costs are still exorbitant for the average Samoan grower. Minimum requirement of equipment to carry out the work is

1. Knapsack Sprayer.
2. Chemicals for weed, pest, disease control.
3. Miscellaneous tools such as knives and axes and other accessories.

Project Phasing (Quarterly):

Under the general heading of "Method of Accomplishing" detail procedure has been elaborated. Commencing with the beginning of 1966, a quarterly review of expected stages is as follows:

1966

January - March

(1) Intensive Staff In Service Training to be supervised by the Coconut Specialist if overseas appointment or the S.A.O. Tree Crops - (local appointment).

(2) Preparation of Coconut leaflot.

(3) Acquisition of all required implements.

(4) Start of Thinning operation.

April - June

(1) Preliminary consideration of applications and screening.

(2) Familiarisation of Project Staff with field procedures and posting. Transfer of Equipment and chemicals to Outposts.

(3) Start on Clearing, Lining Out, and Spacing.

July - September (Expect Initial Output from Nursery)

(1) Continue Clearing, Lining Out and Spacing.

(2) Hole Digging.

(3) Planting Out (3 months @ 470 acres/month)

(4) 1st fertiliser application - 470 month = 1,410 acres.

October - December

(1) Other Pre-Planting Preparations continuing

(2) Maintenance Work.

(3) Payment of Subsidy.

(4) 2nd fertiliser application - 2,820 acres.

Note:

(i) If monthly goals are achieved it is expected that by July/September 1967 5,640 acres (the annual target) will have been planted.

(ii) Savai'i plantings will have at least a 6 months lag as nursery establishment is similarly delayed.

(d) **Benefits Expected:**

Apart from the doubling of present production (estimated £1,000,400 overseas earnings) already stated, with all its associated benefits, the initial years before returns are derived are years of employment opportunities and the receiving of subsidy payments totalling in the 1st year some £15,330 in cash.

The local staff will benefit in specialised coconut husbandary knowledge. Upgrading of Extension "Know How" and effectiveness of Advisory & Extension Services.

Marketing overseas seems assured at reasonable prices.

Possibility of local industry in coconut by products as a result of increased number of palms.

As the project is geared to outputs of nurseries - planting programmes must be timed accordingly. This period of preparation should be used in consolidation and training of staff for the project.

During and subsequent to the completion of the planting, measures should be undertaken to:

(1) Possibility of mechanised harvesting to the extent of wider use of donkeys and carts.

(2) Improve and standardise copra processing.

(3) Look into possibility and practicability of co-operatives in production, processing and marketing of copra.

(4) The advantages of a Coconut Growers' Association and its formation.

The acquisition of low cost permanent agricultural equipment, and low cost chemicals used for coconut and general agriculture.

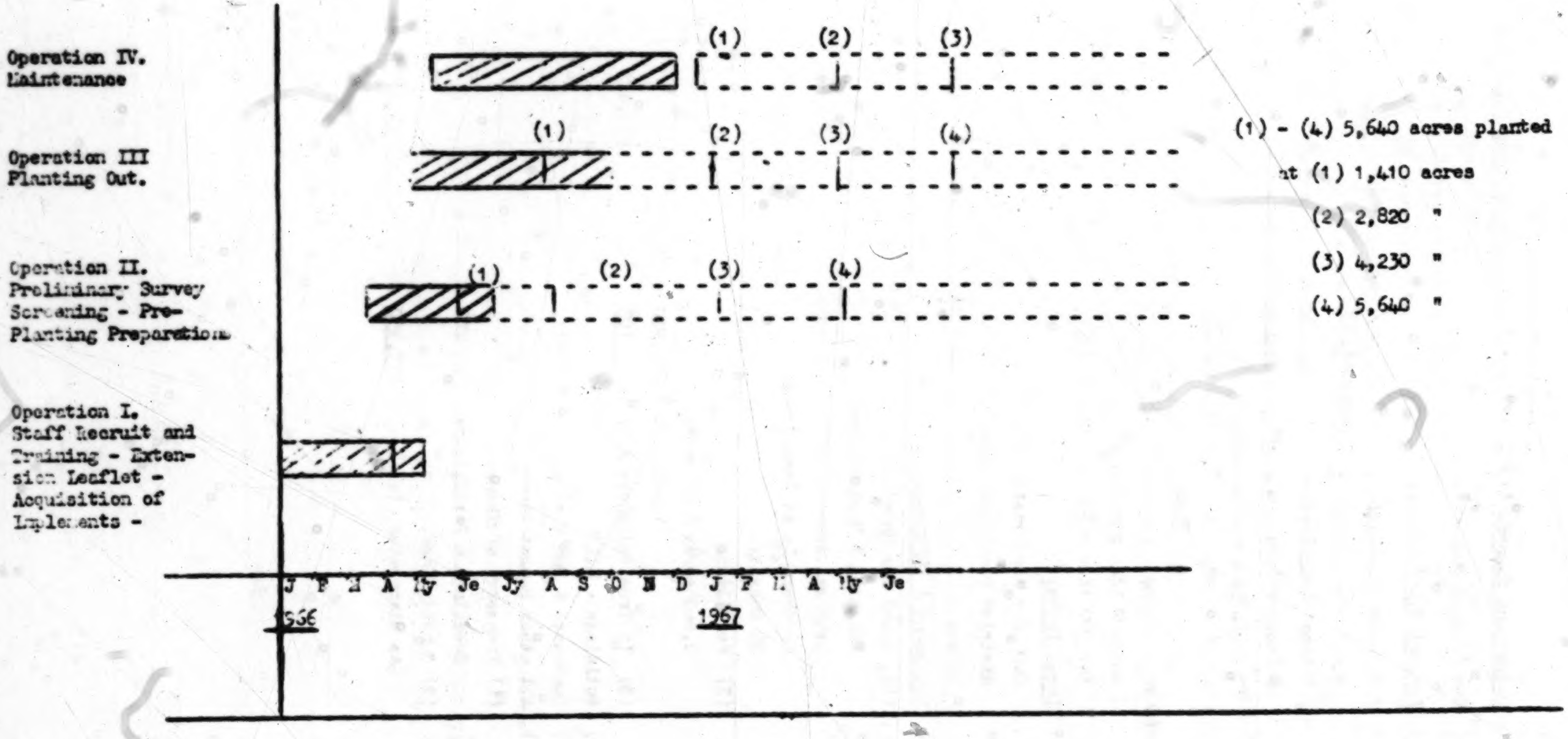
Generally, increased and specialised knowledge on coconut production can be expected.

2. **Project to be Directed By:**

An Overseas Officer as Coconut Specialist pending the qualification and availability of a local officer as S.A.O. Tree Crops. Appointment to be made before December, 1964 so project can start 1965.

3. **Duration of Project and Sequence of Operations:**

Project Starts on:	January, 1966.
Estimated Completion:	1973 when 39,000 acres will have been planted at annual rate of 5,640 acres.


Operation IV.
Maintenance
Operation III
Planting Out.
Operation II.
Preliminary Survey
Screening - Pre-
Planting Preparation
Operation I.
Staff Recruit and
Training - Extension Leaflet -
Acquisition of
Implements -
(1)
(2)
(3)
(4)
(1) - (4) 5,640 acres planted
at (1) 1,410 acres
(2) 2,820 "
(3) 4,230 "
(4) 5,640 "
J F M A My Je Jy A S O N D J F M A My Je
1966
1967

(6) Budget and Finance (1966)

(a) See "Budget Summary".

(b) **Project Staff**: Salary		
Coconut Specialist S.A.O. Tree Crops	Basic £1.500.	
1 Local Counterpart	£ 880	
2 Coconut Officers @ £710	£1,420	
15 Junior Coconut Assistants @ £380	£5,700	£9,500
Wages		
Fertilizer Mixing 3 units @ 12/- per diem for 200 days = 600 man days @ 12/-		360
(c) **Local Travel**:		
£400 for supervision of district plantings in both island	£ 400	400
(d) **Equipment & Chemicals**:		
(1) 2,4-D for Chemical Thinning & Weed Control. 5x45 gal.drums @ £80	£ 400	
Recoverable at Landed Cost-5% Subsidy.		
(2) Fertiliser 5,640 acres @ £3 worth Fertiliser	£16,920	
(3) 15 Tree Injectors @ £7 ea.	105	£17,425
(e) Buildings - Nil.		
(f) Contracts & Sub Contracts -	Nil.	
(g) All other Budget Items -		
(1) Transport of Things Seedlings & Fertilisers -	£ 200	
(2) Subsidy Cash. As elaborated Total	£15,330	15,530
		£33,615

Suggested ways of Obtaining Finance:

1. The original idea of imposing a levy on copra export has not been favoured due to the existence of indirect taxation and export duties.

It is recommended that consideration be given to the acquisition of income derived from export duties for development work. Also the feasibility of a levy on copra exported.

2. That Copra Board be asked for a contribution within its powers to invest in and offset capital costs for Coconut Development.

3. An approach to SPC be made with a view of either acquiring technical assistance from the Coconut Research Unit in Rangiroa or availing facilities there for training of local officers.

4. Request F.A.O. for replacement for Extension Expire, specially qualified in coconut and general Tree Crops.

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ECONOMIC DEVELOPMENT PROJECT APPLICATION

COCONUT PLANTING AND REPLANTING PROJECT

Revised Costing

1. The total estimated costing of the 7-year project as it stands is as follows:

ESTIMATED TOTAL COSTS OF PROJECTS

Coconut Planting:

1st Year (as detailed)			£43,565
2nd Year			
Salaries & Overtime		9,860	
Local Travel		400	
Equipment & Chemicals			
(i) 2,4-D	400		
(ii) Fertiliser			
5,640 ac. maintained	33,840		
5,640 ac. new	16,920	51,160	
Subsidy (Cash)			
5,640 ac. new	15,330		
5,640 ac. maintained			
Category IA. 1000 ac. @ 30/-	1,500		
" IB. 1000 " @ 30/-	1,500		
" IIA. 2000 " @ 40/-	4,000		
" IIB. 1640 " @ 40/-	3,280	25,610	£87,030
3rd Year			
As in Second Year		87,030	
Plus			
Fertilizer for maintenance	33,840		
Subsidy (maintenance)	10,200	44,120	£131,150
4th Year			
As in third year		131,150	
Plus Fertilizer & Subsidy		44,120	£175,270
5th Year			
As in fourth		175,270	
Plus fertilizer & Subsidy		44,120	£219,390
6th Year			
As in fifth year		219,390	
Plus Fertilizer & Subsidy		44,120	£263,510
7th Year			
As in sixth year		263,510	
Plus Fertilizer & Subsidy		44,120	£317,630

Estimate total for 7 years £1,238,545.

2. As total costs come to £1,258,545 this was thought to be well out of Samoa's financial capacity. The project proposal was then analysed for possible reductions of costs when the following factors where considered reduceable:

(a) Acreages for planting - to be reduced due to (1) Output of nursery (2) possible recruitment of the proposed staff.

(b) Cash Subsidy

(c) Fertiliser

(d) Reduce years from 7 to 5 when these were proposed by two members of the Economic Development Secretariat A.O.3. agreed to (a) & (b) and not (c) & (d).

3. Subsequently, the following reductions were tentatively agreed to:

(a) Acreages

1st year: 2,000.
2nd year: 3,000 per annum fixed.

These were to be divided into categories as:-

	1st Year		2nd Year etc.
1A	300	acres	450
1B	300	"	450
IIA	300	"	1,200
IIB	600	"	900
	2,000		3,000

(b) Subsidy Rates:

Category:	1st	2nd	3rd	4th	5th
1A	45/-	20/-	10/-	5/-	5/-
1B	20/-	10/-	5/-	5/-	5/-
IIA	55/-	25/-	15/-	5/-	5/-
IIB	25/-	15/-	10/-	5/-	5/-

(c) Staff

1 Specialist
1 Coconut Officer
8 " Assistants

for 1st year and an additional 2 for 2nd year.

4. It agreed that Economic Development Secretariat would work out Estimated Costs and as budgeting is planned for £250,000 there could be more changes.

5. A.O.U.W. supplied the following figures of nursery output:

No.	Location	Plantable Seedlings	Expected Date for Planting
1.	A.A.C.	19,000	December
2.	Togitogiga	14,000	February
3.	Tepatasi	15,000	February
4.	Faleolo	15,000	February
	Total:	63,000	1st Quarter.

Total for year = 63,000 = 252,000.
252,000 can plant 4,200 acres.

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: AUGUST 1965	2. Department AGRICULTURE

3. PROJECT TITLE: BANANA PRODUCTION

4. DESCRIPTION OF PROJECT:

Attach separate sheets detailing the following:

(a) NEED
(b) OBJECTIVE(S)
(c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: AGRICULTURAL OFFICERS AND FIELD OFFICERS

Title in Organization:

6. DURATION OF PROJECT AUGUST 1965 (Starting Date) DECEMBER 1970 (Completion Date)	7. LOCATION OF PROJECT: VILLAGES AND DISTRICTS UPOLU AND SAVAI'I

8. BUDGET SUMMARY 1966 Only	Government of Western Samoa	Departmental Contribution	OTHER *	TOTAL
Salaries & Overtime		£5,636		£5,636
Transport of Things	£1,000			1,000
Overseas Travel				
Office Expenses				
Stores and Services: Planting Materials, Chemicals	6,440	3,800		10,240
Publications				
Fertilisers	4,325			4,325
Instruments & Equipment	1,050			1,050
Buildings*				
[illegible]*	715			715
Other*				
TOTAL	£13,530	£9,436		£22,966

* Please furnish additional details as requested in the Instructions.

BANANA PRODUCTION PROJECT PROPOSAL

1. DESCRIPTION:

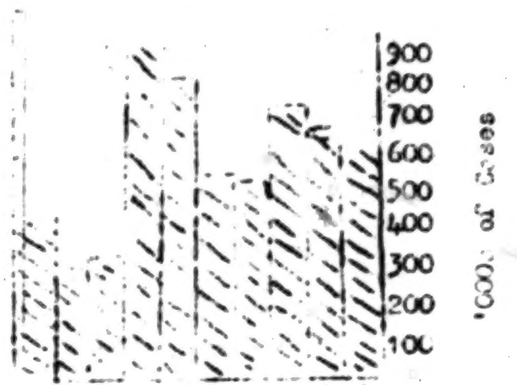
a) Needs and Background:

Samoa's climate is generally excellent for banana growth all the year round since the natural habitat of this crop is a humid tropical climate. The quick monetary return from its production, the guaranteed price, and the minimum of effort and skill required for its cultivation makes banana production an attractive proposition for the small village grower. There is an assured market in New Zealand with other potential markets in Japan and Canada if Samoa can supply them with quality bananas. Admittedly the current price at less than 2d per pound to the Samoan grower is much lower than those received by growers in other banana producing countries e.g. Australia. However, future prospects of higher prices are promising and two possibilities of achieving them are a united stand by Western Samoa, Tonga and Fiji in such matters as price negotiations with Fruit Distributors' Ltd. of New Zealand, or alternately selling bananas by auction in that country.

Since 1958 the annual value of banana exports of W. Samoa has equalled and at times surpassed the values of the other two principal export crops, cocoa and copra. Currently between 6000 to 7000 individual growers are producing bananas for export. The majority of the growers are small producers farming customary land which make up 90% or more of the effective banana acreage. The other 10% are produced by private shippers on their freehold or leasehold properties. It is conservatively estimated that around 30% of the total banana crop is consumed locally.*

The comparatively rapid increase in the volume of banana production since 1952 has been due mainly to the expansion in supply areas and the popularity of the banana as a short term cash crop. However, since 1958 when a peak of 884,555 cases valued at £1,007,189 was reached, total banana production has declined.

Banana Exports



Exports by Value

Year:	Bananas £	Cocoa £	Copra £
1958	1,007,189	1,247,308	618,659
1959	904,281	996,673	1,357,846
1960	647,514	719,788	989,612
1961	644,495	597,592	672,899
1962	908,098	165,802	654,905
1963	824,964	835,649	871,422
1964	790,817	722,307	920,104

(Fig. 47 p.227 "W. Samoa ...." Fox and Cumberland.......UPDATED).

(*p. "W. Samoa ......" Fox and Cumberland ....UPDATED).

The decline in banana production is attributed to several factors. Occasional storms can cause severe damage as they did in 1961 and 1962. Pests and diseases cause considerable losses. However, it is evident that the most serious factor limiting banana production in Samoa is the traditional production method of shifting cultivation and the lack of proper cultural techniques (including pest and disease control) associated with it.

It is now recognized that scab-moth, nematodes, the banana weevil, Sigatoka leafspot and bunchy top are important diseases and pests in Samoa. Scab moth is receiving good control by proper application of DDT dust. The burrowing nematodes, weevil borer and the increasingly widespread sigatoka leafspot acting together are a major cause of low yield and plant decline. Yet they are receiving very little attention. Since 1955 the bunchy top virus disease has established itself in all parts of W. Samoa except for small areas at Falefa in Upolu and N.W. Savaii.

Bunchy Top has completely wiped out banana production in the district of Lefaga and Falelatai, and drastically reduced the production of bananas in several districts.

Year:	Districts [illegible]/Lepale	Safata	[illegible] Coast	S.[illegible].C.*	Lefaga*	Faa
1958	138,037	127,083	73,228	37,742	37,127	94,
1959	114,219	79,894	69,614	21,348	6,161	110,14
1960	25,422	32,939	39,562	1,523	798	121,191
[illegible] effect 1961*	83,345*	35,818	25,660	-	-	54,349*
1962*	98,614	32,070	23,651	-	-	91,97
1963	84,31[illegible]	16,517	16,870	-	-	79,746
1964	65,[illegible]	26,966	7,806	-	-	52,211

Bunchy top is a major problem in itself and recently a full scale campaign against it has been initiated under the direction of a Bunchy Top Officer, Mr J.W. Smith, who has had much experience with the successful control of the disease in Australia. This campaign is intimately complementary to the proposed banana production project.

Almost all village bananas are grown by the time honoured method of shifting cultivation. While bananas are commonly interplanted with young cocoa or in established coconut groves where they are productive for a brief time, banana growing soils are often obtained by felling virgin forest at the inland margin of the village agricultural land and capitalising for a year or two on the plant nutrients resulting from the breakdown of forest residues. After two or three years the soil is depleted of nutrients and has to be bush-fallowed for 5 to 12 years, depending on the soil, before it can be used again to grow bananas or other staple food crops. Sometimes cocoa or coconuts are planted on these "run-out" banana land but in many villages there is a wide gap of abandoned banana-crop land becoming established between the village proper and the current banana and taro plantations at the forest edge. As more and more land remote from the coast is brought into use, growers are finding that they are entering a region of steeper land unsuited to shifting cultivation in which soils rapidly deteriorate in fertility, and where erosion is a problem.

Aside from rapidly deteriorating the fertility of the soil, shifting cultivation is accelerating the rate at which limited and valuable virgin agricultural land is being utilized. The type of soil and the crop most suitable for it is not given any consideration at all, while valuable millable timber is wastefully cut down and left to rot or burned. Often the only means of transport for a village grower and his produce are his two legs and his back. Travelling to and from his remote plantations is increasingly requiring more of his time and effort and is leaving him less time and energy to care for his plantation properly.

Often growers attempt to grow plantations of a size which cannot be adequately managed by a grower and his family helpers. Consequently neglect is widespread and the only care a banana plant receives in its lifetime is the spasmodic weeding (cutlassing) and dusting to control scab moth. Neglection or ignorance of proper cultural methods such as weed control, desuckering, fertilising and pest and disease control are all contributing to the low banana yields and to the poor grade fruit that is being produced in Samoa. It is generously estimated that about 60 cases (75 lbs per case) per acre per year is the present average production figure for Samoa. If so this is less than half that of Australia which is about 150 with top Australian producers capable of producing over 700 cases (50 lbs per case) per acre annually off their land.

What is urgently needed is the rehabilitation of occupied land and the proper use of virgin agricultural land in order to exploit to the full the potential of Samoa's agricultural lands and standing forests. This is possible only through agricultural education of the people, convincing them of the value of efficient banana husbandry and the evils in the exploitation of the land through shifting cultivation.

The need to improve the efficiency of the occupied agricultural lands has been advocated by several agriculturists. Amongst them Mr B.E.V. Parham, former Director of Agriculture for W. Samoa, had this to say: "......... at the present rate of development all unused suitable land will be cleared for agriculture during the next 30 years. The emphasis in planning and action must therefore be on rehabilitation and replanting of areas cleared and planted over the past 80 or 100 years which are now partially or entirely unproductive because of loss of fertility, encroachment by weeds and disputed land tenure." In "Soils and Land Use of W. Samoa," A.C.S. Wright realised this when he advised that: "This lends emphasis to the need for all Samoan growers to make the utmost intelligent intensive use of the land that is already considered to be in production."

Under existing conditions any project which is aimed at increasing banana production must be planned under four phases.

Firstly, an adequate, well-informed and efficient extension staff must be trained to demonstrate to growers that with only little extra effort on their part many aspects of cultivation can be improved without spending money-better planting methods, weed control, desuckering, disease control by hygiene and sanitation are practices which growers with sufficient interest, initiative and energy could adopt.

Secondly, nurseries must be established to provide the required "clean" planting material for replanting schemes and private plantings.

Thirdly demonstration plots must be established in all banana areas of the country to ensure that each grower has the opportunity of observing and putting into practice up to date banana cultivation techniques which are economically feasible for him to adopt.

Finally, replanting schemes similar to those already successfully established and progressing at Fusi in Savai'i and Falelatai in Upolu must be established to assist farmers rehabilitate their lands. These rehabilitation schemes would serve as demonstration plots and also assist in the eradication or control of bunchy top.

b) Objectives:

To organise an improved and increased extension staff in banana husbandry.

To establish "clean" seed producing nurseries which would adequately supply the normal replanting requirements of each district and the anticipated demand from any new areas to be established.

To assist growers acquire knowledge of proper cultural practices in banana cultivation and to convince them, through demonstration in replanting schemes and demonstration plots, of the value of these techniques in increasing the production per acre and therefore the income from their land.

To assist growers rehabilitate their land, which has gone out of production because of disease and declining fertility, through supervised and subsidised replanting schemes.

It is imperative that an adequate and efficient extension staff is trained to capably implement the project. The present organisation in the extension division of stationing Field Officers throughout the country lends itself to the implementation of the project. Furthermore recent developments within the Department of Agriculture whereby the Marketing Division now takes over the inspection of exported bananas from the Extension Division means all of the time and effort of Extension Officers can now be devoted to advising growers on the field. The extension staff is therefore in a very favourable position for implementation of the proposed project.

Provision of "clean" seed to growers will ensure that only healthy vigorous plants are cultivated. Thus costs of attempts at eradicating a disease like bunchy top and pests like the banana weevil and burrowing nematodes will be eliminated.

It is generally recognised that the major limiting factor in Samoa's agricultural development is the attitude of the growers towards acceptance of new agricultural techniques. Demonstration plots should generate interest and eventually desire amongst growers to adopt new innovations. It is essential that growers be made fully aware of the differences between the control and treated plots in terms of quantity and quality in yield and their equivalent in hard cash, particularly differences in profitability. Once the growers are convinced that they can make more money by adopting new methods they will be quite willing to accept them and spend more of their time and efforts in practising new methods on their plantations.

Besides rehabilitation of occupied land and demonstration of simple and correct banana husbandry techniques to growers, the replanting schemes will efficiently combine the resources of the village--land and labour--in accomplishing more productive work. The village growers will thus be more efficiently employed in increasing production per acre of their lands. As a result their individual incomes would increase.

Through replanting schemes some vital aspects of banana cultivation such as chemical disease and weed control, fertiliser use, and production of "clean" planting materials will be provided free of cost for the growers during the establishment and before the produbtion of bananas from the planted area.

Unlike cocoa or coconuts which are more permanent plantation crops, banana cultivation under existing conditions in Samoa lasts for only 2 to 3 years depending on the fertility of the soil, the care the plantation receives and the occurrence of pests and diseases. New plantings are continuously established while at the same time older "run-out" banana plantations are going out of production. Consequently, it is difficult to establish a total acreage under bananas at a particular time without an exhaustive survey. The effective acreage of the banana growing area in Samoa is 16,970 according to A.C.S. Wright in "Soils and Land Use of W.Samoa".

Since banana production in most districts are dropping and the overall total production is declining, it may be safe to assume that the total effective acreage under banana is slowly contracting due to disease and declining fertility. The effects of the bunchy top disease and the drastic measures of eliminating substantial areas of all bananas before a replanting scheme is implemented will inevitably reduce the total effective acreage for a period. This emphasises the need for raising per acre production.

Although the effective acreage may be contracting, the present level of banana exports can be maintained and even increased if production per acre is improved by adopting intensive banana cultivation through organised and subsidised replanting schemes.

If 4 replanting schemes of 100 acres each are established each year starting from 1966, the following will be the expected production increases and the values from such schemes in the next 5 years at 100 cases per acre, 200 cases per acre and 300 cases per acre. If the value of the production from these replanting schemes are added to normal annual productions, projected figures of total banana production per year (cases) and their total values can be estimated for the next 5 years.

This within 5 years banana exports will be more than doubled by production from replanting schemes alone.

See following tables:

EXPECTED PRODUCTIONS AND VALUES OF BANANAS FROM REPLANTING SCHEMES IN THE NEXT 5 YEARS

Year Sttl	R.S. '00s	CASES PER ACRE 100 '000s					200 '000s					300 '000s					Total Re-planted Area
		1966	1967	1968	1969	1970	1966	1967	1968	1969	1970	1966	1967	1968	1969	1970	
1965	2	20	20	20	20	20	40	40	40	40	40	60	60	60	60	60	200
1966	4	-	40	40	40	40		80	80	80	80	-	120	120	120	120	400
1967	4	-	-	40	40	40	-	-	80	80	80	-	-	120	120	120	400
1968	4	-	-	-	40	40	-	-	-	80	80	-	-	-	120	120	400
1969	4	-	-	-	-	40	-	-	-	-	80	-	-	-	-	120	400
5 yrs.	18	20	60	100	140	180	40	120	200	280	360	60	180	300	420	540	1800
Total Value £		25	75	125	175	225	50	150	250	350	450	75	225	375	525	675	

PROJECTED TOTAL ANNUAL BANANA PRODUCTION FOR EXPORTS IN THE NEXT 5 YEARS.
VALUES ARE BASED ON 25/- PER CASE

YEAR	TOTAL PRODUCTION PROJECTED BY ADDING R.S. PRODUCTION TO 633,000 CASES @ 100 CASES PER ACRE		200		@ 300	
	CASES	VALUE £	CASES	VALUE £	CASES	VALUE £
1963	687,095 cases 1,782 bunches	824,964				
1964	646,170 cases 1,479 bunches	790,817				
1965	550,000'	687,500				
1966	633,000° 20,000 rs.	816,250	633,000° 40,000 rs.	841,250	633,000° 60,000 rs.	866,250
1967	693,000	866,250	753,000	941,250	813,000	1,016,250
1968	733,000	916,250	833,000	1,041,250	933,000	1,166,250
1969	773,000	966,250	913,000	1,141,250	1,053,250	1,316,250
1970	813,000	1,016,250	993,000	1,241,250	1,173,250	1,466,250

From 1966 onwards - Projected.

R.S. - Replanting Scheme

°633,000 - Estimated total production for 1966 - Average for 1960-1965.

'550,000 - Estimated total production for 1965.

Note: **"These projections do not allow for a decline in areas at present producing but which are badly affected by Bunchy Top, which are averaged, or for other reasons declining in production. It is felt that the declining trend over the last few years would continue for some of these areas at least.**

The formula of adding potential replanting production to the present annual production figure may therefore give total figures for those projections which are rather high."

c) Method of Accomplishing:

The overall banana production project consists of 4 operations:

1. In-service training for Extension Officers.
2. Nurseries establishment for production of "clean" seed material.
3. Demonstration plots for the education of growers.
4. Replanting scheme for rehabilitation and bunchy top control of village occupied land.

1. In-service Training for Extension Officers:

The immediate conducting of in-service training in banana cultural practices for extension officers is of top priority and is vital in the smooth and successful implementation of this project.

Each extension officer should be familiar with the project as a whole, particularly his duties and responsibilities.

The department has now drawn up a programme of In-service Training which would enable all staff engaged in extension work to gain up to date knowledge of the best husbandry, disease control and cultural practices for each of Samoa's major crop plants.

This project will withdraw from field service a number of officers at a time to attend short courses at Alafua College, Nafanua Research Station, Avele Farms and other areas on aspects of each of the main crop plants and livestock husbandry.

Officers will be provided with a loose leaf type permanent "Handbook of Agriculture for Western Samoa." This will be gradually build up as courses proceed and as each crop is studied. It will contain the standard accurate recommendations of the department with contain the standard accurate recommendations of the department with respect to all aspects of the cultivation of each crop. Furthermore officers will be provided with sets of personal equipment which will be their responsibility to care for and maintain. Officers will use this equipment to demonstrate with to farmers.

The initial programme will be conducted by the Director of Agriculture, the Chief Agricultural Officer and Agricultural Officers.

The initial programme is scheduled for the period 12th August to 31st December 1965. Topics relevant to the banana production project include:

1.	Banana Nursery Establishment Lectures and practical demonstrations at Alafua	10-9-65.
2.	Banana Cultural Practices at:	
	a) Alafua : No.1	15-10-65.
	" : No.2	12-11-65.
	b) Nafanua: No.3	10-12-65.

These topics will be summarised and will form Part 1 of the Handbook for extension officers. They will also be adapted and printed in a volume of Laufasi Ola which will be made available to all banana growers.

2. Nurseries Establishment:

The immediate establishment of nurseries is essential because they must supply "clean" planting materials required for replanting schemes, demonstration plots and private plantings. Thus the selection of sites and establishment of nurseries must be accomplished by the following dates:

		UPOLU	SAVAI'I
1.	Selection of Sites :	31-10-65	15-12-65
2.	Establishment of Nurseries :	31-12-65	28- 2-66

Nurseries at Alafua, Fusi, Asau, Sala'ilua and Fagamalo are now being established, 13-8-65.

The sources of planting materials for nurseries are Falefa in Upolu and N.W. Savai'i in Savai'i. These locations are believed to be free of bunchy top infection.

The extension officer in collaboration with his agricultural officer will select the site which must be approved by the Chief Agricultural Officer. He will be responsible for the maintenance and control of the nursery and for the distribution of planting materials therefrom. The department through him will provide recommended advice and assistance in the form of chemicals, fertilisers and planting materials.

The districts will have to assist in the clearing, planting and maintenance work. Growers will have to apply for planting material which will be supplied to them at no cost except that of transport.

Acquisition of customary land for nursery sites where necessary will require discussion between the Ali'i and Faipule of the district and a Senior Officer of the department. The department will require exclusive use of such land for five years. If suitable land cannot be found by negotiation on this basis, the Director of Lands will require to take land for this purpose. In order to include finance for this purpose, he will need to make provision for this in his draft estimates for 1966.

The area required will vary according to the expected demand for planting materials in the individual districts but a maximum acreage of two will be required.

3. Demonstration Plots:

A demonstration area of at least 1 acre is to be set up by individual extension officers in cooperation with a grower.

The plot is to be maintained by the grower and the extension officer. The grower provides the land and labour and agrees to accept advice and assistance from the department, through the extension officer. The department provides advice consisting of standard banana culture recommendations, and assistance in the form of planting materials, fertiliser and if necessary spray material for an initial two year period. Departmental labour assistance will be provided only where specialised operations are carried out.

The plot is to be divided into two sections. One will receive optimum recommended cultural practices and the other will be reserved as a control representative of traditional banana cultivation methods in Samoa.

Complete and detailed records on all costs of production, yields and income from both plots must be kept by the extension officer in cooperation with the grower.

The success of the demonstration plots depend equally on the extension officer and the grower he works with. Therefore the extension officer must select his man wisely. He should choose a grower who is trustworthy, cooperative, receptive to new ideas and one who possesses the ability to assist him in the accurate recording of reliable data.

4. Replanting Schemes:

A replanting scheme is a combined effort by the department and the village people who own the land or site chosen.

Firstly, the department and the village authorities must formulate an acceptable arrangement whereby:

1. the problem of customary land tenure is resolved.
2. the marketing of all bananas from the scheme is quaranteed.

Secondly, the department must provide what the grower cannot accomplish himself. Such aspects of intensive banana cultivation include;

1. selection of a suitable area and its subdivision with due respect to bunchy top incidence in the district and the measures taken to ensure that its occurrence as well as those of other diseases in the replanted area will be minimised or excluded. The need for rehabilitation of the district must also be considered.
2. advice and direction in lining out, holing, spacing, desuckering, etc.
3. provision of financial assistance, ways and means in obtaining suitable planting materials, fertilising, chemical spraying against diseases and pests, and fencing to keep out livestock as well as the provision of the tools and equipment required.

Finally, the village growers will provide the required labour force to clear the land, to perform the holing, planting, desuckering and other maintenance and followup work.

Once the project is established departmental assistance should be limited to free advice through the extension officer of the area. By this time growers will be receiving income from their bananas, income which can be used to pay for chemicals, fertilisers, etc.

Assistance in subdivision and survey of the site is required from the Department of Lands and Survey. Assistance may also be required from the P.W.D. for land clearance and road construction.

d) **Benefits Expected:**

Demonstration plots and nursery establishments will provide the extension officer with a leading point through which he would meet farmers of his district and disseminate to them recommended practices not only on bananas but on all agricultural crops and livestock as well.

Besides obviously increasing banana production the overall project would:

1. intensify banana production thereby releasing much of the land at present under inefficient extensive banana cultivation. The land which becomes available can be replanted, in an orderly fashion under departmental supervision and advice, with bananas or other crops which are better suited to the soils of the area.
2. through replanting schemes, set a level of high standards of correct intensive husbandry methods to which growers will aspire. Replanting schemes will in this way accomplish for the banana industry what WSTEC's cocoa and coconut plantations have done for the cocoa and copra industries.
3. reduce the rate of wasteful and haphazard deforestation of virgin lands. These virgin forests will then be reserved for purposes for which they are best suited, such as coconut, cocoa, cattle ranging or forestry production.
4. harness the village resources of labour and land and combine them efficiently resulting in increased production per acre and income per acre to the individual.
5. acquire estimates of cost of production per case of bananas. At present estimates of costs of production per case of bananas are not readily available. This has hindered past cases put forward to FDL for an increase in price for bananas. Thus accurate estimates of production costs arising from demonstration plots would be invaluable to the department in its future attempts to get higher prices for the growers' bananas.

At present local consumption by a rapidly increasing population and the New Zealand market absorbs all the banana production of W. Samoa. It has been estimated that New Zealand can absorb a maximum of one million cases per year from Samoa. If Samoa should ever export more than this other markets may be found in Japan and Canada.

2. PROJECT DIRECTION AND LOCATION

1. In-Service Training of the Extension Staff:

The following is an initial schedule for the training of extension officers in recommended banana cultural methods:

Date	Programme Details	Officers Responsible	Place	Time
10.9.65	1. Banana Nursery Establishment. Lectures and Practical Demonstration.	1. A.O.S. 2. Banana Officer 3. Ag. Farm Manager Alafua	Alafua	1.15p.m.
15.10.65	2. Banana Cultural Practices No.1 Preparation of land. Lining out Planting out Selection & treatment of planting materials.	1. A.O.U.W. 2. Ag. Farm Manager - Alafua 3. Banana Officer	Alafua	1.15 p.m.

12.11.65	3. Recording Techniques Basic Requirements of good reports.	1. A.O.Hqs.	Savalalo	10.30 a.m.
	4. Banana Cultural Practices No.2 Care of the young plant. Fertiliser use. Desuckering practices Weed control by misting with herbicides.	2. A.O.S. 3. A.O.U.W. 4. Bna. Officer	Alafua	1.15 p.m.
10.12.65	5. Banana Cultural Practices No.3 Insect and pest control in bananas. Bunchy top disease recognition and control. Care of the developing bunch. Preparation and handling for packing.	1. Entomologist 2. Bna. Officer 3. A.O.I.C. Nafanua 4. S.P.I.	Nafanua	1.15 p.m.

2. Nurseries:

Each nursery should be located in areas where departmental facilities are in existence or planned to be erected. Otherwise nurseries should be located near where the extension officers stay in their districts.

The following is the schedule of tentative nursery sites:

Nursery Site	Reasons for Selection		Areas Supplied	Officers Responsible	Duration
UPOLU:					
Alafua	Existing facilities		Aleisa/Lepale, parts of N.W. Coast.		1965
Avele	"	"	Parts of N.E. Coast and N.W. Coast		
Falelatai	"	"	S.W. Coast, Remainder of N.W. Coast.		
Safaato'a	Planned	"	Lefaga District		
Sataoa	Planned	"	Safata district		
T/togiga	Existing	"	Falealili		
Mutiatele	"	"	S.E. Coast		
Falefa	Planned	"	Fagaloa Bay, Le Mafa area, Remainder of N.E. Coast.		
SAVAI'I:					
Fusi	Existing	"	Faasaleleaga		1965
Fagamalo	"	"	Fagamalo		
Asau	"	"	N.W. Savai'i		
Sala'ilua	"	"	S.W. Savai'i		
Vaito'omuli	"	"	Palauli area.		

3. Demonstration Plots:

Demonstration areas will be established in twenty districts presently under extension officers, preferably in locations where growers are not already exposed to improved banana husbandry techniques through replanting schemes and nurseries. The site should be in a public locality where it will be exposed to as many people as possible.

4. Replanting Schemes:

It is planned to have each region - Savai'i West, Savai'i East, Upolu West and Upolu East - implement at least one replanting scheme per year. A total of 4 schemes per year.

A study of the individual districts indicate some districts are declining much more rapidly in their banana production. These districts then should have priority over other less unfortunate districts.

The following schedule includes some of these districts and also the estimated production from replanting schemes of 100 acres at 100 and 200 cases per acre per year.

Site	District	Reasons for selection	Stage of development	Duration	Acreage	Officer in Charge	Estimated annual production 100 c/a	200 c/a
Fusi	Faasaleleaga	BT & R	Established.	'65-7	100	A.O.S.	10,000	20,000
Falelatai	S.W.Coast	R & BT	"	'65-7	100	A.O.U.W.	10,000	20,000
Lalomanu	E. Coast	BT & R	Preparatory.	'66-8	100	A.O.U.E.	10,000	20,000
	W. Coast	BT & R						
	Lefaga	R & BT						
	Safata	BT & R						

3. DURATION OF PROJECT AND SEQUENCE OF OPERATIONS:

OP.4 REPLANTING SCHEMES

OP.3 DEMONSTRATION PLOTS

OP.2 NURSERIES

OP.1 IN-SERVICE TRAINING

Initial Training of present field extension officers would be completed in December 1965. By this time sites for demonstration plots and nurseries have been selected. "Clean" seed materials from Falefa in Upolu and Asau in Savaii will supply initial demonstration and nursery plots.

Immediately after extension officers have completed their training in banana cultural practices they will commence establishment of demonstration and nursery plots. They will be assisted by their respective Agricultural Officers.

While establishment of demonstration plots and nurseries are progressing, selection of suitable sites for replanting schemes and the necessary negotiations involved will be taking place. By the time planting materials begin to become available from nurseries, sites for replanting schemes would have been selected, cleared (fallowed where necessary) and prepared for planting out.

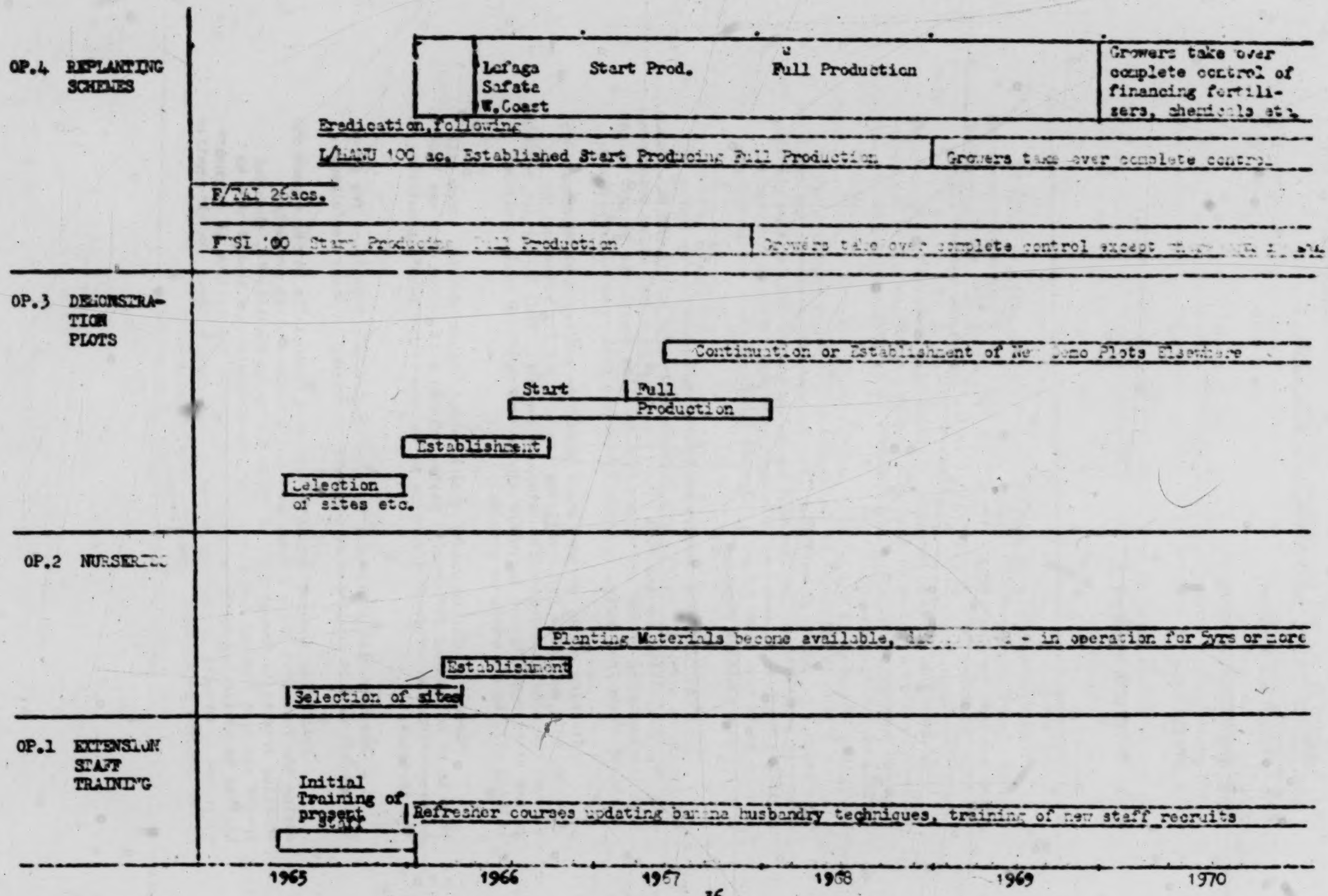
Demonstration and nursery plots must be planted early during the wet season to allow the plants to establish themselves before the dry season sets in. Replanting schemes must also be planted at a time which coincides with the beginning of the wet season 1966 to allow the plants to grow up and establish themselves during the most favourable environmental conditions.

Training of the present staff should be completed by December 1965. However, more qualified field officers are required for extending the present chronically understaffed extension service. Thus in-service training of new staff recruits and refresher courses for updating banana cultural methods will be a continuous process.

Nurseries will be established by about August of 1966. They will have to be maintained for about 5 years. Within this period they may have to be discontinued or extended according to the demand for planting material in the district.

Demonstration plots will be maintained by the department for about 2 years but will be continued or otherwise according to their usefullness.

Replanting schemes should be assisted financially by the department during the formative years (about two) until bananas start producing enabling growers to invest some of their income in fertilisers, chemical sprays and some limited equipment. Department assistance should then be limited to advice and spray services which involve acquisition of expensive equipment by growers if the department did not provide them. An alternative is for growers to cooperate and buy equipment needed.


OP.4 REPLANTING SCHEMES
Lefaga
Safata
W.Coast
Start Prod.
Full Production
Growers take over complete control of financing fertilizers, chemicals etc.
Eradication, following
L/MANU 100 ac. Established Start Producing Full Production
Growers take over complete control
F/TAI 26acs.
F'SI 100 Start Producing Full Production
Growers take over complete control except
OP.3 DEMONSTRATION PLOTS
Continuation or Establishment of New Demo Plots Elsewhere
Start
Full Production
Establishment
Selection of sites etc.
OP.2 NURSERIES
Planting Materials become available, - in operation for 5yrs or more
Establishment
Selection of sites
OP.1 EXTENSION STAFF TRAINING
Initial Training of present staff
Refresher courses updating banana husbandry techniques, training of new staff recruits
1965
1966
1967
1968
1969
1970

IIb

AG.3.2.8/2

BANANA PRODUCTION PROJECT

1. Objectives remain the same as those of the original project presentation.

2. Costings have been scaled down for 1966 since the considerable item £3480 for planting materials is included in general estimates for Agriculture Department, several other minor costs items will be absorbed within normal Departmental financing. In addition fertilisers for nurseries have been considerably reduced and overall fertiliser use slightly scaled down. Chemicals and sprays have also been heavily reduced. All these changes have the approval of the Agricultural Development Advisory Committee.

3. As resolved by the same Committee a levy of 6d per case has been calculated on estimated production increases. This has not been projected beyond the 6th year. This would be deducted from all cases produced under this project by P.M.D. and paid as a grant towards financing the next years operations. By the end of the 6th year approximately 25% of the capital input would have been recovered in this manner.

4. After 1966 when nurseries have been established and Demonstration areas have also been established maintenance charges only will be necessary for these. This will reduce the annual input by some £4500 for succeeding years.

5. The objective of 400 acres replanted per year will consume approximately the same amount of finance annually 1967-70.

6. The project envisages assistance for 1 year only for any particular scheme. The extent to which additional help may be necessary depends entirely on the response of the farmers and this cannot be judged at this stage.

7. Costings in detail for each part of the 1966 project are attached.

8. Tabulations of projections 1966-70 are attached.

T. Cunliffe

(T.M.S. Cunliffe)
DIRECTOR OF AGRICULTURE

BANANA PRODUCTION PROJECT

AMENDED 1966 BUDGET SUMMARIES

1. Nurseries (20)

		Govt. of W. Samoa	Departmental Contribution			
Selected sites in Upolu 10 -	Staff		108			
in Savai'i -	Planting Materials		72			
2 acres each.	Fertilisers	60				
	Chemicals & Sprays	30				
	Equipment	27.10. 0.				
	Per 2 acres.	117.10. 0.	180	Total x 20	2350	3600

2. Demonstration Plots (20)

Selected sites in Upolu 10 -	Staff		106			
in Savai'i 10 -	Planting Materials		12			
1 acre each	Chemicals & Sprays	14				
	Fertiliser	11				
	Equipment	3				
	Per 1 acre	28	120	Total x 20	560	2400

3. Replanting Schemes (4)

Selected sites Savai'i -	Staff		229			
Upolu -	Planting Materials		450			
100 acres each.	Fertiliser	750				
	Chemicals & Sprays	1400				
	Labour	150				
	Equipment	100				
	Transport of Materials	400				
	Per 100 acres.	2800	679	Total x 4	11,200	2716
					14,110	8716

Total Cost 20 Nurseries, 20 Demonstration Plots and 4 Replanting Schemes for 1966: = 22,826

BANANA PRODUCTION PROJECT. PROJECTIONS.

SUMMARY DESCRIPTION		Govt. of W. Samoa	Departmental Contribution	Totals 1966	1967	1968	1969	1970	Total Costs 5 years project.
Proportionate time of Departmental staff employed	Salaries and Overtime		5236	5236	5000	5000	5000	5000	25,236
Wages in assisting initial lining out of plantations	Wages	600		600	600	600	600	600	3,000
Supplied under provisions in Bunchytop Control. 1966 Estimates	Planting Materials		£3480	3480	1845	1845	1845	1845	10,860
For 1st year only of Replanting schemes for Nurseries and Dem. plots	Fertilizer	£4420		4420	3500	3500	3500	3500	18,420
For Control of Aphids and Black Spot in Nursery. Black Spot in plantations and Demonstrations.	Chemicals and Sprays	6480		6480	5500	5500	5500	5500	28,480
Essential Equipment for dipping and Treatment of planting materials	Equipment	1010		1010	750	750	750	750	4,010
Fertilizer, chemicals planting materials	Transport of Materials	1600		1600	1200	1200	1200	1200	6,400
Costs	Totals	14,110	8,716	22,826	18395	18395	18395	18395	96,406
Objectives of Project in acres replanted.		205 2 acre Nurseries established. 20 1 acre Demonstrations established. 400 acres New plantings established.			Nurseries and Demonstrations maintained. 400 acres New Planting	400 acres New Planting	400 acres New Planting	400 acres New Planting	2,000 Acres New plantings created + 200 replanted in 1965. 2,200 Acres Total.

/Tumble

.B. levy per case :r all assisted replanting ized at 6d per case for 1966.	Estimated returns from levy of 6d per case on Expected production from replanted areas.	Return expected only from 1965 plantings.						6th year on	Total recovered by levy
		20000 Cases £500	60000 Cases £1500	100000 Cases £2500	140000 Cases £3500	180000 Cases £4500	220000 Cases £5500	200000 Cases £5000	£23,000

The levy should continue for 5 years after 1st crop from any project in 6 years from commencement of assistance.

levy returns should amount to at least £23,000 for a project this si

i.e. approximately 25% of the invested capital.

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: **September, 1965**	2. Department **Agri. Land, Econ. Develop.**

3. PROJECT TITLE: **LATA LAND DEVELOPMENT**

4. DESCRIPTION OF PROJECT:
Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY:
Title in Organization: **LATA DEVELOPMENT CORPORATION**

6. DURATION OF PROJECT **1 year after Inception** (Starting Date) **25 years later** (Completion Date)	7. LOCATION OF PROJECT: **Lata, Island of Savaii**

8. BUDGET SUMMARY 1st year

	Government of Western Samoa	Departmental Contribution	OTHER *	TOTAL
Salaries & Overtime			1,160	
Local Travel*			300	
Overseas Travel			250	
Office Expenses				
Furniture				
Plant Materials			9,700	
Plant & Equipment			24,950	
* Instruments & Equipment				
Buildings*	4,400		22,200	
Contracts*	4,400		200	
* Land	13,350			
TOTAL	£ 17,750		£ 58,760	£76,510

* Please furnish additional details as requested in the Instructions.

LATA BLOCK LAND DEVELOPMENT

Description of Project:

Need and Background:

Western Samoa's major economic base is agriculture and it is to the land that most Samoans must turn to in order to make a living. When the 6,035 acre Cornwall Estate Block at Asau is fully developed, there would still be a need for an additional 25,000 acres to be placed into cultivation by 1971 in order to keep up the ratio of people to land at the current level of agricultural productivity.

The economic growth of Western Samoa has not kept pace with the increase in population. Increases in agricultural production and export are small relative to population growth. Reasons attributed to this relative decline are the extent of cultivation and the low productivity that exists per acre in the villages. The general conclusion is that the small-holding or subsistence village system of agriculture as developed in the past cannot by itself meet the needs of the nation.

In order to improve the economy of Western Samoa it is necessary to develop plantations of a larger size along with village agriculture. Only through large-scale planting of new land and increased production per acre can Western Samoa expect a significant increase in its agricultural production and exports.

It has been proven conclusively that large-scale planting of new land, either by corporations or individuals, is more successful than the small-holdings by way of amount of production per acre as well as quality of production.

This project proposes to mold together large-scale agriculture with the individual small planter approach. In the first instance, land will be developed on a large-scale corporate basis. The corporation is to amortise its investment over a number of years and then parcel out the land to individual growers as developed land together with stock.

It is proposed that the Lata Block at Sala'ilua consisting of 11,760 acres of land be developed, on a phased basis over five years. The Lata Block land is geographically suitable for a variety of agricultural pursuits including: coconuts, cattle raising, macadamia, afforestation, pineapples, annatto, taro and bananas. A large section of the Lata Block development of land is best suited for coconut cultivation combined with cattle grazing. It is abundantly clear that copra is and will continue to be one of Western Samoa's most important exports. Further, the new crop, the macadamia nut, which has considerable potential is also well suited as a combination with cattle grazing.

Objectives:

(1) To increase the amount of cultivated land in Western Samoa.

(2) To establish an efficient farming area with high production per acre.

(3) To increase the volume of agricultural exports.

(4) To develop farms that can be leased out to potential farmers of the nation.

(5) To create employment and income and to increase tax revenues.

Method of Accomplishing:

It is proposed to develop Lata Block in a sequence of five increments made to spread over an initial period of five years. Two approaches are covered in planning:

(i) That part of the land presently on lease to WSTEC (approximately 500 acres) and a parcel of freehold property known as "Lata-i-tai" (approximately 180 acres) situated on the coast are incorporated in the overall development plan for Lata Block. With these two additional parcels the total acreage would be 12,500.

Recommendation on Government Purchase of Land:

SINCE FROM A RECENT SURVEY OF LATA (INCLUDING THE TWO AREAS CONCERNED) IT WAS EVIDENT THAT WITHOUT THE TWO ADDITIONAL PARCELS THE EFFICIENT CULTIVATION OF THIS LAND WILL BE CONSIDERABLY IMPEDED, IT IS RECOMMENDED THAT THIS LAND BE PURCHASED - IF NECESSARY UNDER THE TAKING OF LANDS ACT 1964.

(ii) The second approach assumes the exclusion of the two non-government parcels for a total acreage of 11,760.

The plan outline in brief contains:

(a) The development of the entire area by a Development Corporation for a period upwards of twenty-five years (25) after which the land will be subdivided in sections of 50 acres and leased to tennents to be selected by the Corporation Board;

(b) The primary objective is the development of large-scale coconut planting and cattle grasing;

(c) The initiation of large-scale plantings of macadamia nut trees which will be primarily planted at elevations above that suitable for coconuts.

Following is an outline of goals for each year between 1966-1970:

1st year :	Preliminary preparations - Legislation; Land Survey; Soil Survey; Water Supply Survey; Extraction of Timber; Roading Survey and Construction and Recruitment of Personnel, key labour and establishment of nurseries.
2nd year :	2,000 acres from coast extending inland - coconuts, bananas and other crops.
3rd year :	3,000 acres - coconuts and macadamia.
4th year :	3,000 acres - macadamia.
5th year :	3,000 acres - macadamia.
	Total acreage 11,760.

1. Organisation and Financing:

It is recommended that an independent Lata Development Corporation be established to develop the Lata Block. Considerable capital outlays would have to be made before the Corporation begins to receive the full benefits of development since the plan is to combine the long term crop developments of coconuts and macadamia nuts with cattle grazing. The interim crop - bananas will provide some income before the long term tree crops begin to bear.

The biggest initial problem is the equity capital needed. The only real source for such development is the Copra Board. The Board has indicated some interest in investing its funds in development projects in Western Samoa so that the nation may profit from its surplus as opposed to investing it at low interest rates overseas. The other alternative is to seek overseas aid for the project. The first alternative of obtaining funds from the Copra Board would be preferable since it would not only take considerable time to obtain overseas aid but copra producers themselves will benefit from the returns on the investment and the nation will benefit from increased employment, income and tax revenues. In this project there will also be an eventual increase in copra production.

RECOMMENDATION:

It is recommended that the Copra Board Ordinance be amended to:

1. Allow the investment of Copra Board Reserve funds in the Economic Development Plans of the Government of Western Samoa where the principal of such investments has, in the Board's judgement, a reasonable chance of being returned and where such investment will result in employment and income for the nation.

2. That the Copra Board determine how much of its reserves may be invested in the nation's economic development plan projects and what part should be kept in the stabilisation fund.

There should, of course, be other investors in this project from Western Samoa. Unfortunately, existing corporate laws do not allow the establishment of public corporations in Western Samoa. This means that only a limited number of individuals can invest in the corporation.

RECOMMENDATION:

It is recommended that full investigation be given to the introduction of legislation which would permit the establishment of public corporations in western Samoa and allow the sale of stock to the general public.

Whatever the ownership, the Lata Development Corporation would be legally established and a Board of Directors and officers of the Corporation would be chosen.

The manager and assistant manager can be hired directly by the Corporation or a management contract can be made with Western Samoa Trust Estates Corporation to provide management services. W.S.T.E.C. could, of course, also be a major stockholder in the Corporation.

2. Lease and Purchase of Land:

RECOMMENDATION:

The Development Corporation should be given a 60-year lease on the land. The terms of the lease can provide that the Corporation may develop the land and earn the proceeds therefrom for a period of 45 years. From the 45th to the 50 th year, the Corporation can be required to lease the land to individual settlers. The lease agreement should also provide that the Government will grant a lease to the individual settler upon the expiration of the Corporation lease for a period of not less than 20 years. The lease rent to Government for the first five years should be waived.

For the next 15 years, the lease rent based on the current rate of 5% on £15 per acre for bushland would total some £8,820 per year for the 11,760 acres now owned by the Government (11,760 acres at £15 per acre = £176,400 x 5% = £8,820). If the Government acquires the W.S.T.E.C. and McFall properties, the lease rent to Government would total some £9,487 per year on a total acreage of some 12,440 acres (including 70 acres in coconuts valued at £60 per acre x 5%).

The cost of purchasing the W.S.T.E.C. and McFall properties is estimated as follows:

W.S.T.E.C.:	40 acres at £60 per acre = £2,400	
	460 acres at £15 per acre = £6,900	£ 9,300
McFall Property:	30 acres at £60 per acre = £1,800	
	150 acres at £15 per acre = £2,250	£ 4,050
	Total Purchase Cost:	£13,350

3. Land Survey:

The first operation in the development of Lata Block is a survey of the land to establish its boundaries.

4. Soils Survey:

It is necessary to know the basic soil content and its fertility in order to -

(a) determine whether there are any elements lacking;
(b) to determine the most suitable areas for the crops and pasture grasses required for successful coconut and macadamia nut planting and cattle raising; and,
(c) to obtain a closer estimate as to what can be expected in production from the land.

In the development plan for the Asau area, provision is made for the recruitment of two soils experts from the Soils Bureau of D.S.I.R., New Zealand to undertake this survey under the New Zealand aid programme.

It is recommended that these services also be requested for the Lata Block. This survey could collaborate with the available information of C.S. Wright in "Soils and Land Use of Western Samoa", (Soils Bulletin 22) published in 1963. It is anticipated that a soils survey of Lata would take approximately two months with some information already available. The soils survey should be the responsibility of Government since the Lata Block is Government land and ownership of the land will be retained by Government. If New Zealand aid is not available then the Government should recruit two soils experts on short term assignment. An amount of £1,600 should be set aside for this purpose on the contingency that New Zealand aid might not be available. If New Zealand aid is available there would still be the limited expense of providing for local living costs and local travel.

5. Timber Cruise:

In order to determine the extent and value of timber resources on the Lata Block, a timber cruise is necessary. Here again, as in the Asau Land Settlement Scheme, New Zealand assistance should be sought. An amount of £800 should be allocated for this purpose should New Zealand aid not be available. If New Zealand aid is available there would still be the minor cost of providing for local travel and living expenses.

6. Water Supply:

The only known source of water supply is the Sala'ilua spring which supplies Sala'ilua and Fagafau. This is located approximately three miles inland and serves the two villages adequately during the wet season only, in the dry season there is barely sufficient water to supply both villages. It is believed that there are several other springs inland of Sala'ilua.

The New Zealand Government has offered to pay the costs of the water drilling expert on the Asau Block. This expert is expected in Western Samoa during January 1966. New Zealand should again be asked to assist by providing for the services of the water drilling expert. If New Zealand aid is not available, then Government should provide for the cost of water drilling. The cost of the water system itself is properly that of the Development Corporation. The Government should pay its commensurate share of the water system extended to areas other than the Lata Block lease. A sum of £1,400 should be set aside for water drilling costs for some six months. This is commensurate with the fee received by the water drilling expert on Niue Island. The cost of developing the water supply system will, of course, depend on the results of the water drilling.

7. Extraction of Timber:

The Corporation may decide to extract all the available timber on Lata in two ways:

(1) That it buys and operates a sawmill on the block, which will be fairly expensive; and,

(2) That the Sawmilling Company contracted to harvest the timber on the Asau Land Development Scheme or some other milling operation be contracted to undertake the extraction and milling operations.

There are advantages in both methods. Since the Lata Development Corporation will have as its primary purpose the agricultural development of the land, it should allow someone else to harvest the timber if that is possible. The Corporation would obtain a stumpage fee for the timber harvested.

If no milling operation is available to harvest existing timber then the Corporation will have to extract the timber itself.

The duration of the timber extraction operation cannot be determined for the whole area. It is recommended that four to six months of the latter part of 1966 should be set aside for timber extraction on increment one. Thereafter, experience should govern the company in timing its operation, provided the actual operation keeps abreast if not ahead, of other developmental work.

8. Roading Survey and Construction:

Following the land surve , it is desired to carry out a roading survey as early as possible on increment one. An old stone road constructed some fifty years ago is located on the western lower portion of Lata. It extends from the Main South road to the coast and covers a distance of approximately two miles. A survey recently conducted of this area disclosed it to be clearly definable and would be eight to ten feet wide in most places. It is rock-filled all the way down to the coast; evidence would show that this road has not been used for many years.

It is recommended that this road be reconstructed with priority. From this "main" road, subsidiary or inspection roads (generally nine feet wide) could then be built at right angles and parallel to it in spaced intervals forming a network of inspection roads interlaced in the increment. The road surveying can be accomplished for the Corporation by the Department of Lands and survey for a fee. An amount of £ 200 is being set aside for this purpose.

The survey and initial reconstruction of the old road is expected to take about four months to complete. Thereafter, work could begin without delay on the construction of inspection roads in increment one.

9. Recruitment of Personnel

It is anticipated that the full complement of personnel for the first year of development (2nd year) will be made up as follows:

Manager	1	Salary maximum £3,500	(will be hired during organisational year
Assistant Manager	1	Salary maximum £1,400	" " "
Administrative Off.	1	Salary maximum £ 880	" " "
Storeman	1	Salary maximum £ 710	
Labour	100	Salary maximum at 10/- per day.	

Since a project of this magnitude requires top management talent and technical skill, it is essential to recruit from overseas a project manager of skill and wide experience to be ressonsible for its overall supervision. His recruitment should be widely advertised in Australia, the United States of America, New Zealand and other overseas areas. He will be the principal operating executive of the Corporation and should be carefully selected.

The assistant manager may be recruited locally. The scope of his responsibilities will be wide and a man of considerable experience in handling personnel is recommended.

The administrative officer will carry out all the administrative functions of the employee settlement.

The storeman will look after a Corporation-owned store and will have also the functions of a supply officer.

The recruitment of labour may be undertaken both on Savai'i and Upolu. There is every indication that the greater part of the labour force may be recruited on Savai'i. However, certain labour in the class of drivers and others with mechanical or special skill are preferably recruited from Upolu. Among these, it is hoped to recruit as many graduates from the Agricultural Colleges (in Western Samoa) including Avele, Salafai, Chanel etc. as can be interested in employment on the project. Provided their worth is proved they may be considered eligible for eventual settlement on subdivided sections. Their remuneration may be made according to their agricultural qualifications, on a scale slightly above ordinary labour.

L

10. The Employee Settlement

(a) **Sites:**

There are three potentially good sites for the employee settlement:

(1) If the W.S.T.E.C. property is acquired the first natural site for the settlement should be on 500 acres sub-leased from W.S.T.E.C. to a Mr C. Leung Wai. These are among the initial advantages:

- (i) Over 500 acres are already cleared.
- (ii) It is located on the main road.
- (iii) Nurseries could be established there without delay with coconut planting material on hand.
- (iv) It is a central location.

(2) Again if course one were adopted, the first alternative site is "Lata-i-tai"; there are over 100 acres of uncultivated land there that could be developed for the employee settlement. The main advantage in this is the direct accessibility by the reconstructed original road.

(3) If the W.S.T.E.C. and McFall properties are not acquired, there is a site to the east of the W.S.T.E.C. lease which is on the main road and which is on good elevation for growing of food crops for the settlement.

(b) **Housing the Settlement:**

Housing of the employee settlement will consist of the following:

House for Project Manager	£5,500
A duplex building consisting of five units to be occupied by (1) Assistant Manager, (2) Adminstrative Officer, (3) Storeman, (4) Storeroom, (5) Office headquarters	£10,000
Four dormitory-type line houses each to house up to 25 labourers. Two will contain men with families, two for single men.	£6,000
Shed for housing equipments and lighting plant	£ 600
Shed to house petroleum and fuel products	£ 100

(c) **Store and Supply Organisation:**

It is proposed to set aside ten acres of the settlement site for development into foodcrops to supply the needs of the employed personnel.

This "Garden" will contain bananas, taro and vegetables; perhaps two acres of this could contain livestock in the form of poultry and pigs. It is intended that the Corporation will own and operate a store to supply the general needs of the personnel. The Corporation should develop the garden. Set rations of foodstuffs - staple and meat, may be distributed or sold at the store. It is not intended for the store to be a profit-making undertaking, but a practicable and convenient method of organisation. This method eliminates the need for personnel to plant their own foodcrops, a practice which has been shown to contain many undesirable tendencies.

The supply of meat (protein foods generally) may present a minor problem of supply initially. However, there are beef cattle farms on Savai'i from which beef carcasses may be bought. Freezer goods, fish, mutton and eggs are easily transported from Apia.

11. Equipment:

For purposes of budgeting for major equipment, the cost outlay for timber milling operations has been excluded on the strength of the preceding recommendations. The following heavy and light equipment will be engaged in clearing and developmental work:

One bulldozer D6 8	£15,000
Two Tip-trucks (3 tons)	3,200
One big truck (5 tons)	1,500
Two landrovers (SWB)	2,400
Five chain power saws	500
Cables, picks, axes, knives, shovels etc.	600
Lighting plant	1,200
Pipelines	550

Additional equipment may be required and budgeted for in the second year of operation. At the completion of Lata Block development, much of the equipment will be available for further developmental work of public land on Savai'i. The landrovers will be needed for the project manager and for use at headquarters.

Crops, Cattle and Planting Materials:

The quantities of various planting materials required cannot with accuracy be estimated in advance of the actual development process. The rate of clearing and road construction determines to some extent the timing and amount of planting materials to be established from nurseries. Some initial amounts are necessary and may be considered together with the development by increment as follows:

Increment 1 - Second Year - 2,000 Acres:

The clearing process other than timber, commences this year. Intercropping may be permitted of coconuts and bananas. Some minor intercropping of shallow rooted fruit trees, vegetables and taro might also be done. Intercropping would permit the preparation for coconuts and arable fodder grasses for cattle. At the same time an income is derived during the years before coconut trees begin to bear and beef is sold. Intercropping should be carried out as far as the cleared lands permit.

A coconut nursery should definitely be established during the first year for the 2,000 acre block development. Seedling requirements are 60 trees to the acre or 120,000 trees. With a 50% mortality rate some 240,000 nuts must be planted. The purchase cost of these nuts at 25/- per 100 nuts is some £3,000 - some 12 acres will be required for the nursery site. A nurseryman must also be hired. His salary is listed at £425 per year

Banana planting materials can be purchased on Savai'i and there is no need to develop a nursery. Some 300 plants are needed per acre. At £1 per 100 plants it would take some £6,000 to purchase the required number of plants.

Grafted plants as well as seeds must be purchased for the macadamia nut nurseries. The macadamia nut nursery must also be established early so that planting materials will be available for the second and third increments. Some 500 grafted plants should be purchased at approximately £1 per plant or £500 and 100lbs rough shelled seeds at some £1.2.0 per lb or £110. Together with transport costs, etc, some £700 should be allocated. Three varieties, Kakea 508, Ikaika 333 and Keahou 246 have proven most productive and should be tried. In addition, a nurseryman at £425 per annum is needed.

Increment 2 -

On increment two, development is expected to be along the same lines as the previous increment. The inland boundary is on altitude about 1,200 feet above sea level. Coconuts are limited to an elevation of 700 feet after which macadamia nuts should be planted. After five or six years the banana trees should be cleared to allow the introduction of pasture grasses and cattle.

At elevations between 400 feet and 700 feet above sea level, that is before coconuts reach the upper limits of their natural habitation, it is recommended that two belts of macadamia nut trees be planted on either side of the main coconut planting to serve as a vegetation barrier against the rhinoceros beetle. It is known that a clean macadamia orchard does not provide breeding sites for beetles. The experiment could well produce results that could later be emulated on other land developments.

Increments 3 and 4 -

It is proposed that the upper reaches of Lata should occupy mainly macadamia nuts and cattle. Experimental plantings could be initiated of selected species of indigenous and exotic trees such as the following:

Nuts:	Cashew, avocado pears
Citrus:	(species) lime, lemon, sweet orange, grapefruit, mandarin or tangerine
Trees:	(species) albizzia, poumuli, cedrella, mahogany

All these are evergreens adapted to growth under relatively dry and moist areas, although tolerating variations in climatic conditions. This environment is present at Lata. A system of cultivation can be determined when certain factors relating to development are known. Until then, it is considered that increments 3 and 4 should be planned as described.

Benefits Expected:

The Lata Land Development Scheme will make a significant contribution to the economy of Western Samoa. With more bushland placed into cultivation an increase in production and export income will result. The new coconut planting will help solve the problem of a stagnant and diminishing coconut industry. That portion of the Lata Block which will be cultivated in cattle raising and macadamia nuts simultaneously, an association already proven compatible in other areas such as Hawaii, will show the benefits of a more diversified agricultural economy in a country which has relied far too long on three major tree-crops for its economic existence.

An agricultural development plan of this magnitude will create a substantial amount of employment. Labourers, overseers, managers etc. will have to carry out the necessary action to make this plan a reality. At the final phase of the Lata Land Development Scheme, many families will be provided with highly developed plantations. Given a plantation as a "going concern" the Lata Block settlers will be in a position that would permit them to make a profit immediately after they move in.

EXPECTED REVENUES TO NATION

YEAR	CROP	AREA	QUANTITY OF PRODUCE	REVENUES TO COUNTRY
3rd year	Bananas	2,000	200,000 cases	£ 250,000
4th year	Bananas	5,000	500,000 cases	625,000
5th year	Bananas	5,500	550,000 cases	687,500
6th year	Bananas	5,500	550,000 cases	687,500
7th year	Bananas	3,500	350,000 cases	437,000
	Copra	2,000	400 tons	24,000
8th year	Bananas	500	50,000 cases	62,500
	Copra	3,500	780 tons	50,700
	Cattle	2,000	500 head	10,000
9th year	Copra	3,500	940 tons	61,000
	Cattle	5,000	1,750 head	35,000
10th year	Copra	3,500	1,095 tons	71,200
	Macadamia	2,000	1,070 tons	120,000
	Cattle	8,000	3,200 head	128,000
11th year	Copra	3,500	1,250 tons	81,300
	Macadamia	4,000	2,800 tons	312,000
	Cattle	11,000	4,000 head	160,000

The above expected revenues to the country figures were arrived at after taking into consideration the crop yield variations from initial planting until such time the cultivations are at their peak producing capacity. It will be noted that ultimately, banana cultivations will be replaced by cattle in order to attain the long-term coconuts and cattle and macadamia and cattle plantations. Top producing of all the cultivations may be expected in 15 years. At this stage annual revenues to the country derived from the Lata Land Development Scheme may be estimated as follows:

	ACRES	QUANTITY OF PRODUCE	REVENUES
Copra	3,500	1,400 tons	£ 91,000
Cattle	11,000	4,400 head	175,000
Macadamia	4,000	6,000 tons	670,000
		TOTAL:	£ 936,000

Project to be Directed By:

The project will be directed by a Corporation formed in the first instance for the purpose of developing the Lata Block but may well at a later stage engage in development of other lands in Western Samoa.

It is proposed that the major stockholder in the Corporation be the Copra Board. It will determine who will manage the project by virtue of its majority shareholdings in the Corporation. If the Copra Board is unable to invest substantially in this project, then overseas aid should be sought.

It is recommended that a committee consisting of the Directors of Agriculture, Lands, Economic Development and the Secretary to the Copra Board be established to assist in initiating the project until the Development Corporation is formed.

Phasing of Development.

The whole of 1966 will be taken up carrying out the necessary action preceding the actual cultivations of the Lata land. This preliminary action includes purchase of W.S.T.E.C. and the McFall properties, formation of Corporation, surveys, purchase of equipment, recruitment of personnel, house construction etc. 1967 will mark the beginning - clearing of land and planting of crops. Following is a schedule of phasing in the development of the Lata Block.

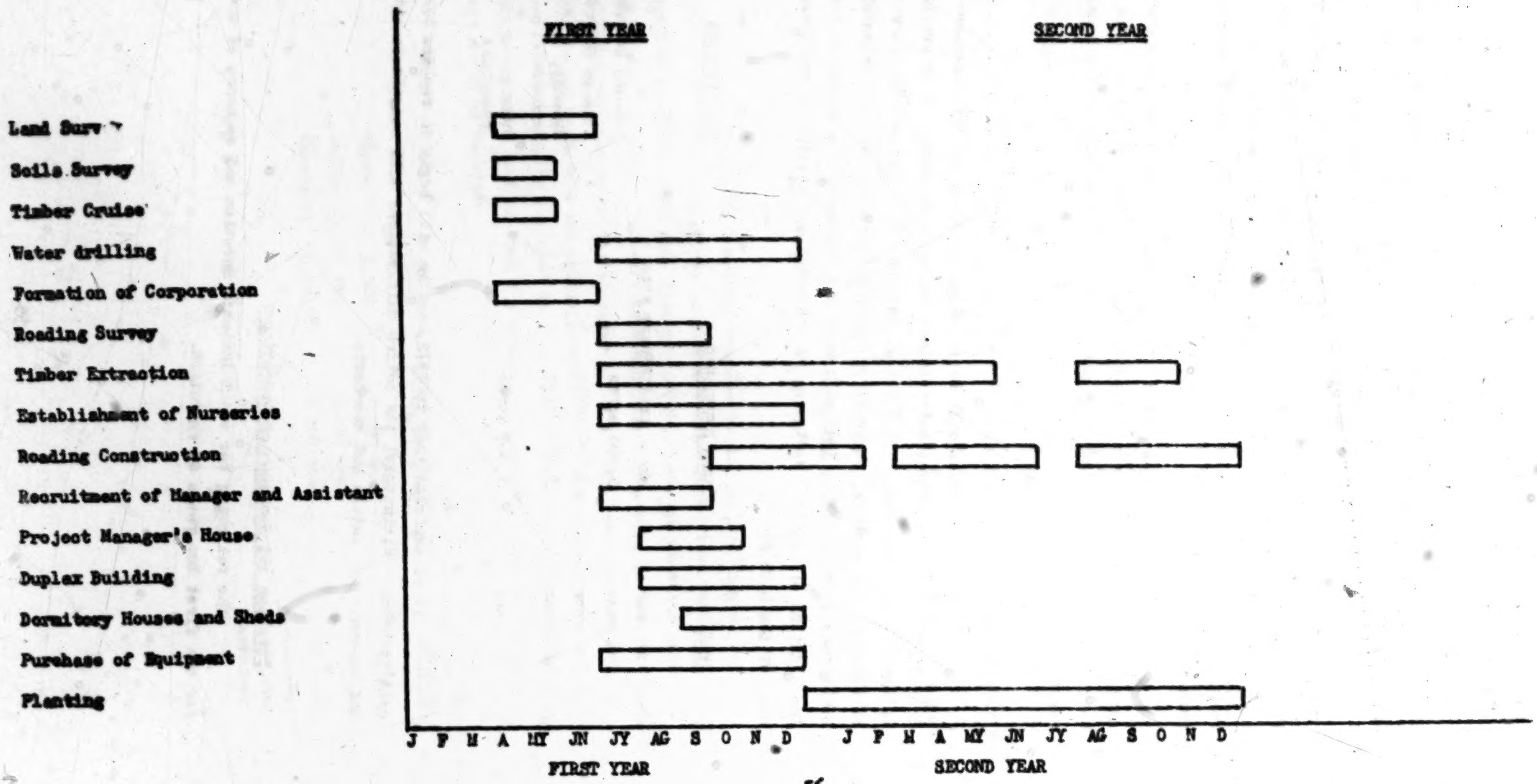
YEAR	AREA DEVELOPED	CULTIVATIONS
1st year	nil - preliminary work	-
2nd year	2,000 acres	Bananas and coconuts
3rd year	3,000 acres	Bananas and coconuts
4th year	3,000 acres	Bananas, macadamia
5th year	3,000 acres	Bananas, macadamia

It is expected that in 1972, cattle will begin to replace banana cultivations. Ultimately, the entire cultivations will constitute cattle and coconuts and cattle and macadamia.

Duration and Sequence of Operations:

The following bar chart indicate duration and sequence of operations for the first two years of operation.

Duration and Sequence of Operations : Lata Development Corporation



Budget Summary:

A considerable capital outlay would be required to develop all the Lata Block (11,760 acres). On the premise that it costs £75 to develop an acre of land from "bushland to yield" some £882,000 would be needed.

Capital requirements are explained elsewhere in this project under the heading Method of Accomplishment.

Annual Breakdown of Costs

FIRST YEAR ESTIMATES:				
Land Purchase (W.S.T.E.C. and McFall Properties)	(Govt	Cost)	£13,350	
Land Survey	"	"	600	
Soils Survey	"	"	1,600	
Road Survey			200	
Timber Cruise	"	"	800	
Water Drilling	"	"	6,100	24,400
Buildings:				
Home for manager			5,500	
5 Unit duplex building to house (1) Assistant Manager, (2) Administrative Officer; (3) Storeman; (4) Storeroom; (5) Office headquarters			10,000	
4 Dormitory-type line houses			6,000	
2 Sheds			700	22,200
Equipment:				
1 Tractor D8			15,000	
2 Tip Trucks (3 tons)			3,200	
1 Big Truck			1,500	
2 Landrover			2,400	
5 Chain Power Saws			500	
Cables, picks, axes, knives, shovels etc.			600	
Lighting Plant			1,200	
Pipelines			550	24,950
Personnel:				
Project Manager			900	
*Nurserymen			210	
*Labour			50	1,160
Planting Material:				
Bananas			6,000	
Coconuts			3,000	
Macadamia			700	9,700
Travel and Transport:				
Overseas - Project Manager and Personal Effects			250	
Local			300	550
TOTAL ESTIMATED BUDGET FOR FIRST YEAR:				82,960
Less Estimated Government Contribution:				17,750
ESTIMATED BUDGET FIRST YEAR - DEVELOPMENT CORPORATION:				£58,760

SECOND YEAR:

Personnel:		
Project Manager	3,500	
Assistant Manager	1,400	
Administrative Officer	880	
Storeman	710	
Casual Labour (28,050 man days at 10/- per man day)	14,025	
Secretary to Corporation (part-time)	600	
Drivers (4)	960	
Nurserymen (2)	850	22,925
Road Construction:		
10 miles at £350 per mile for first increment only		3,500
Pipelines:		825
Planting Material:		
Bananas	2,000	
Coconuts	3,000	
Macadamia	700	5,700
Supplies:		
Fuel, maintenance and repairs of equipment and buildings		2,000
Local Travel:		300
TOTAL BUDGET FOR SECOND YEAR:		£35,250

IV

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: **SEPTEMBER 1965**	2. Department **AGRICULTURE**

3. PROJECT TITLE: **COCOA PLANTING PROJECT**

4. DESCRIPTION OF PROJECT:
Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: **SENIOR AGRICULTURAL OFFICER TREE CROPS**
Title in Organization: **(PROPOSED POSITION)**

6. DURATION OF PROJECT	**1 January 1966** (Starting Date) **31st December 1968** (Completion Date)	7. LOCATION OF PROJECT: **HEADQUARTERS IN APIA** **PLOTS VARIOUSLY LOCATED**

8. BUDGET SUMMARY

	Government of Western Samoa	Departmental Contribution	OTHER *	TOTAL
Salaries & Overtime	**SEE COCONUT PLANTING PROJECT**			
Local Travel*				
Overseas Travel				
Office Expenses				
Furniture				
Publications		**£ 100**		**£ 100**
Plant & Equipment				
Instruments & Equipment				
Buildings*				
Contracts*				
Other*	**£2,386**			
TOTAL	**£2,386**	**£ 100**		**£2,486**

* Please furnish additional details as requested in the Instructions.

GOVERNMENT OF WESTERN SAMOA
Department of Agriculture

ECONOMIC DEVELOPMENT

PROJECT PROPOSAL : COCOA PLANTING

1. Description of Project

(a) Need:

This project proposal as an integral part of and a sequent to the "Multiplication of Superior Cocoa Planting Materials Project". Reasons leading to the ultimate need for the two projects are analogous. However, a few observations are added.

Unlike the static tending towards a decline export trend in copra, cocoa has steadily increased over the past ten years.

COCOA EXPORT AND VALUE 1954 - 1964

Year	Quantity Exported (Tons)	Value (£s)
1954	2,399	937,681
1955	3,118	882,510
1956	3,338	668,171
1957	3,069	684,562
1958	4,209	1,247,308
1959	4,025	996,673
1960	3,721	719,788
1961	4,101	597,592
1962	5,258	1,165,802
1963	4,324	835,649
1964	4,480	722,307

But for the past seven years, average production has averaged some 4,302 tons with little deviation. This apparent static condition in production may be attributed to the following reasons:

(1) Wide price fluctuations over this seven year period and its effect on the growers. (£242 per ton in 1962 to £165 per ton in 1964).

(2) Black pod disease responsible for 20-45% of produce loss (H.C. Smith 1957).

(3) No substantial replantings.

(4) General complacent attitude.

D.H. Urquhart, a world's authority on cocoa, visited Western Samoa in 1952 sponsored by SPC on their Project E.2 - "CASH CROP" with a view to investigating "production areas such as Papua & New Guinea, Western Samoa, New Caledonia and New Hebrides, and an assessment of the plans for the extension of cocoa and of suitable areas in which production may take place". Since then the Australian Government has followed up his recommendations and launched a project also involving much vegetative planting materials (cuttings) with the result that New Guinea has superseded Western Samoa's position as top producer of cocoa in the Pacific.

It is interesting to note from his report, as he also proposed rapid propagation of high yielding, disease resistant clones locally selected (e.g. Lafi 7) that he states "Of the Future of Cocoa in Western Samoa" that "it is true that the application of enlightened assistance to the industry should lead to a considerable increase in output and put the industry on a safer basis for future years."

Briefly his report "Cocoa Growing in Western Samoa" SPC Technical Paper No.39 may be summarised in the following points.

(1) W. Samoan conditions are ideal for cocoa growing
where (a) yields are high up to 16 cwt. dry beans/ac.
(four times that of Trinidad)
(b) no over head shade requirements.

(2) The fortunate state where W.S.T.E.C. (then N.Z.R.E.) has set a high example in cocoa management, which example should be emulated by the Samoans who produce more than 80% of the cocoa. Of Samoan Planters Urquhart states that they do not "usually conform to the ideal in the matter of adequate preparation of the site for planting, spacing, shading and pruning."

(3) A survey of the status of the Cocoa Industry then,

(4) Optimistic Forecast of Future of Cocoa in Samoa.

(5) Recommendations - including
- (a) Effective, Extension Services.
- (b) Soil surveys (since has been carried out by G. Wright).
- (c) Survey of high yielding and disease resistant trees and their propagation etc. etc.

Since, this will be the first time that substantial quantities of cocoa cuttings are propagated, the need is to select favourable locations for planting where they would have the greatest impact. Guidance on planting and subsequent establishment husbandary must be unsparingly and expertly provided.

The use of cuttings as planting materials has not been widely accepted in Samoa. The following issues were recorded for:- (D.A. Annual Reports).

1960	-	1,930	cuttings
1961	-	183	"
1962	-	2,000 +	"
1963	-	1,204	"
1964	-	810	"

Apart from other botanical differences, it is known that because of the growth habits of seedlings and cuttings, planting distances are different. For instances.

	Distance	Plts/acre
Seedlings	9'-12' in the square	537 to 302
Cuttings	12'-18' in the square	302 to 135

There is thus a need not only to widely and convincingly propagate the requirements but to improve on present cocoa management. viz.

Preparation of sites, shade control at early stages, and pest and disease control. The assistance required would be trained personnal in the extension service to guide growers. They will in turn need an overall expert who will be the source of technical information.

(b) Objectives:

This project proposes to control the issue of the 25,000 cuttings produced per year from the Propagation Units at Nafanua. Its main objective is to selectively issue the plants to suitable sites and closely supervise their planting and husbandary in their establishing years. Its over all aim is to double the production, not accounting for replanting with seedlings, in 34 years with increased plantings of some 5,000 acres at an estimated production of 1 ton dried cocoa beans per acre. (Multiplication of Clonal Cocoa Planting Material). It is generally felt however that the spacing of 17' can be reduced to 12' requiring 302 plants to the acre. With a fixed output of 25,000 cuttings per year, this means that $\frac{25,000}{302}$ or approx. 80 acres can be planted a year. Because this project is geared to the estimated capacity of the propagators, 80 acres a year provide a controllable planting programme and a reasonable supplement of responsibilities to the Staff also employed in the Coconut Planting Project, headed by a Senior Agricultural Officer, Tree Crops. (see C below).

An additional 80 acre increment per year when it reaches the 1 ton an acre production would create the following estimated earnings from overseas:

In five years' time 200 tons at £165 (last years low average price) = £33,000 per year.

In ten years' time 800 tons at £165 = £132,000 per year.

Estimated Capital Costs of Cocoa Propagation is £8,000.

Using an estimated 3 acres to be maintained as intensive cultivation by an average family of 5 - by the end of ten years, about 1,330 will have found steady employment and directly benefitted from incomes derived off their plots.

Technically, the project aims at the introduction of cuttings as planting material and their associated culture. It is a step towards more intensive agriculture; and its aimed at systematically introducing improved husbandary practices.

(c) Method of Accomplishing:

A priority in the establishment of a more effective agricultural extension division. The function of such a division would be to pass on to the Samoans the knowledge of sound technique of plantation practice. The proposed Senior Agricultural Officer, Tree Crops should at the first instance plan Staff Training Courses to equip his subordinate staff with the required knowledge. A period of 3 months' intensive training including requirements for the coconut project should be adequate.

Although cocoa culture is generally widely known, it is clear from observations as confirmed by D.H. Urquhart - that there is need for the Samoans to improve

(1) Preparation of the sites for planting.
(2) Better spacing.
(3) Better shading control and fertilising.
(4) Pruning and disease control.

now that the question of planting material is somewhat settled.

The Senior Agricultural Officer Tree Crops is to formulate a detail approach to overcoming the above problems based on local experience and observations abroad. Due emphasis should be placed on the novelty of cuttings to Samoan growers.

Wide propagation on "Improved Methods of Cocoa Planting and Care of the Young Plantations" should be circulated using all possible audio-visual media.

Suitable site for planting can be selected, guided by the knowledge of the Cocoa Belt - on the northern and central slopes of Upolu Island, where successful cocoa cultivations have been carried out and pending the availability of land in this area. A suitable site for Savaii can be made when the work is extended. However, it is recommended that as only 80 acres are planted per year, the new plantings be confined to Upolu to minimise transportation costs.

Having selected the planting sites Field Staff suitably equipped can generally guide and supervise the following practices on approved basis.

(1) Land Clearing - Under brushing and Selective Felling.
(2) Clearing Planting Strips about 2' wide and Lining.
(3) Planting Shade Crops (Look into the merits of using *Laucaena glauca* as an alternative to dadap) (Erythrina spp.)
(4) Digging Holes and 'Weathering' for 2 - 3 weeks.
(5) Planting.
(6) Weed Control.
(7) Fertilising.
(8) Pest & Disease Control.
(9) Pruning.
(10) Shade Control.

Recommendation:

It is recommended that each grower receive assistance for the first three (3) years, after which time another project formulating a policy for processing and marketing, take over.

Cuttings start bearing at 1½ to 2 years after planting compared to seedlings which take 3-5 years. It is considered that after three years' of assistance the growers will receive sufficient income to stand on their own. This will have the following effect:-

1966 - 80 acres) + 80 acres
1967 - 160 acres) + 80 acres
1968 - 240 acres) + 80 acres
1969 - 240 ") - 80 acres
1970 - 240 ")

After 1967 - The project will look after a constant 240 acres per year.

Subsidies:

The reluctance by growers to spend money on capital improvement particularly in purchasing fertiliser, pruning gear, weed, pest and diseas control chemicals and equipment is a hinderance to the adoption of improved practices. The minimum requirements for the cocoa farmers are:-

1) Fertiliser.
2) Knapsack Sprayer.
3) **Pruning Gear:**
   1 Pair Secateurs.
   1 " Lopping Shears.
   1 Pruning saw.
4) **Chemicals:**
   Bordeaux (Hydrated Lime & Bluestone)
   Weed Control Chemicals.
   Coal Tar for tree wound dressing.

Fertiliser:

From preliminary work at Nafanum Agricultural Station, the following fertiliser mixture is recommended.

In terms of N.P.K. = 10 : 6 : 10
In weight ratio of Sulphate of Ammonia: Superphospnate: Muriate of Potash = 30 : 20 : 10.
Cost per lb. of mixture = 5d.+1d. for mixing = 6d.
Cost of fertiliser per acre at ½lb/tree 2 applications for first year = 300/-
Since an acre contains 300 spaced 12' x 12'.

For the second and third year application rate is 1lb/tree for each application. This is £30/acre/year.

Equipment: (Landed Cost)

Knapsack Sprayer	= £17. 0. 0.
Secateur	= -.16. 0.
Lopping Shear	= -.17. 6.
Pruning Saw	= -.10. 0.
	£19. 3. 6.

Cost of Spray Materials:

1½ lbs. bluestone @ 1/3 a lb.	= 1/11
1½ " Slaked lime @ 5d. "	= -/8
	2/7

Sufficient for 100. 1-3 yr. old cuttings.
For 300 young trees = 7/9 per acre per application
i.e. for 6 applications at fortnightly intervals in
August, September and February = 46/6/acre per year.

Weed Control Spray Material:

2,4-D ½ gall/acre @ 45/- per gall. = £1. 2. 6.
Dalapon 5 lbs/acre @ 8/- per lb. = £2. 0. 0.
£3. 2. 6/acre/application

For 3 applications per year = £9. 7. 6/acre/yr.

Recommendation:

(1) **Fertilizer** - that these be issued free to the farmer's gate.
(2) Spray Material for Disease Control also be issued free.
(3) **Equipment**: - that all pruning and spraying equipment be sold at landed cost minus 5% subsidy.

These forms of assistance of subsidy in kinds will help the farmer over the initial high costs of establishing for it is known that once the cocoa trees grow under ideal condition little to no weed control is required.

Project Staff Recommendation:

It is recommended that the same staff proposed for the Coconut Planting Project, incorporate work involved in this project.

i.e.

S.A.O. Tree Crops

UPOLU
1 Senior Officer
10 Assistants

SAVAII
1 Senior Officer
5 Assistants

As only 80 acres are required yearly this staff should be in a position to specialise in this work supplementing to their responsibility in the coconut project.

It is considered, however, that all possible assistance be given to increase the propagation output to its maximum capacity. Propagating houses located in districts would provide multi-advantageously to the growers' needs at much reduced costs. Propagation of cocoa seedlings should be considered as it is generally felt that the cuttings would not supply the demand.

Project Phasing:

January - March 1966:

(1) Appointment of Staff
(2) Staff Training Courses.
(3) Acquisition of all equipment and chemical.
(4) Extension Pamphlet.
(5) Field Posting.

April - June 1966:

(1) Initial Clearing. (80 acres in 40 acre lots)
(2) Lining.
(3) Establishment of Shade Crop.
(4) Hole Digging.

July - September 1966:

(1) Repeat 1 - 4 above.
(2) Planting (40 acres).

October - December 1966:

Maintenance (Weed Control, Fertiliser, Spraying).
Planting 40 acres. Total Established = 80 acres.
Preplanting Preparation 20 acres.

January - February 1967:

Maintenance 80 acres
Planting 20 acres.
Pre-planting Preparation 20 acres etc.

End of 1967 - 160 acres established.
End of 1968 - 240 acres maintained.

Project Limitations.

(1) Limited Scope:
80 acres of cuttings will not justify additional staff over and above those recommended for the Coconut Planting Project. Although it will provide additional work for this staff, it is considered that it could cope with four times this number of acres to be settled or even more. There is however wisdom in starting at a low level but due expansion should be considered particularly suitable sites for propagation units in the districts.

(2) The planting of seedlings is by far the most widely accepted planting material - almost all of the present plantations. The project does not include the normal expected increase in cocoa seedling planting.

(3) Processing also is not catered for. It will alone justify another project.

(4) Spacing is tentatively recommended at 12' x 12' or 302 plants/acre. Overseas report contain recommendations at 10' x 10' or 435 plants/acre. Optimum spacing in West African experiments is 7½' x 7½' or 774 plants/acre!
The question of spacing should be more closely studied for Samoan conditions.

(5) Staffing:
Because of the dependence on the proposed staff for the Coconut Planting Project to carry out this work on cocoa, it is imperative that top level staff be made available.

This move in the Extension Division to expand the present establishment is well justified for purposes of extension services alone. It is emphasised, that the proposed addition is a move towards specialisation. A survey of the local officer with a view to qualification and availability should first be made. This should then be extended overseas. This is the key position in the two projects and is the source for all technical requirements and assistance.

(6) Cocoa Varieties:

Though the Propagation Units are to primarily produce Lafi 7 with its known advantages, continuation of Dr H. Smith's selection and further surveys should be carried out in the light of D.H. Urquhart's observation and Papua New Guinea's move to increase "bulk" cocoa. It is considered that this factor is the most important for future marketability of cocoa beans.

(d) Benefits Expected:

The introduction of cuttings as planting materials takes the growers a further step towards specialisation and more intensive agricultural practices. Increase in technical know how, e.g. fertiliser usage, judicious pruning, use of improved pest and disease control etc. will not only directly benefit the "cutting culture" but spread to cocoa management at large.

The estimated £13,200 (for 80 acres at 1 ton an acre) per annum represents overseas earnings for yield of one year's planting. With the three years' plantings 240 tons will earn £396,000 per annum.

The need to stabilise price and markets for the expected increase in produce cannot be over emphasised. A set up similar to the Copra Board and its role is deemed essential for cocoa. It was only in 1962 that cocoa comprised of 43% of the export trade of. copra 24% and bananas 33%.

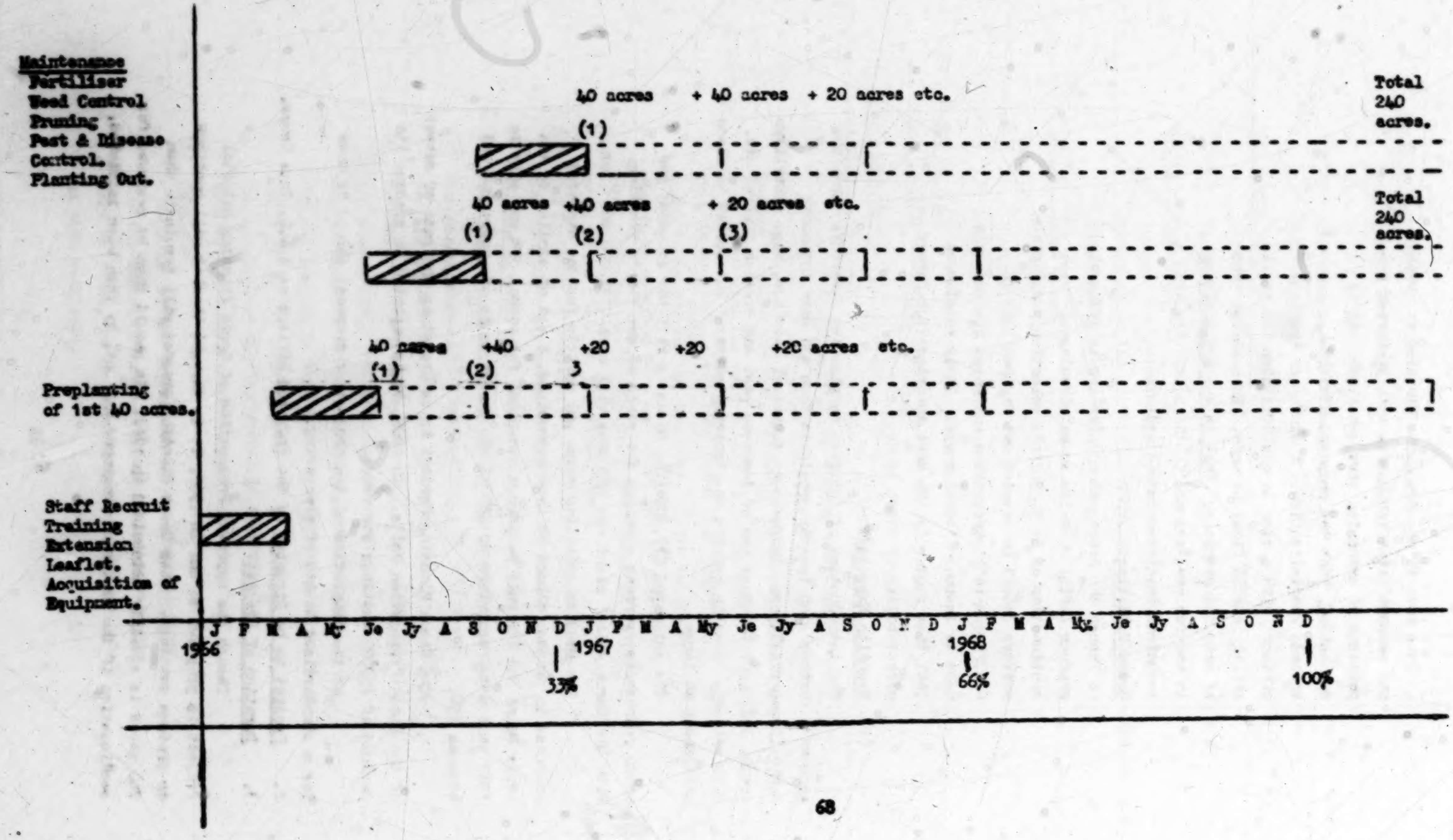
The Cocoa Planting Project is as urgent as the rate of output of the Cocoa Propagation Units. In 1966, it is expected to produce its maximum of 25,000 cuttings per year.

At the completion of the project, a proposal should be made for a standardised method of processing.

2. Project to be Directed by the proposed officer as S.A.O. Tree Crops.

3. Duration of Project:

Though the approved Propagation of Cocoa Planting Material Project is proposed to end in 1966, it is thought that it will continue to produce cuttings. This Cocoa Planting project will terminate when 240 acres is steadily maintained in 1969. It should then be reviewed for continuation if the expansion programme has not, by then been initiated.


Maintenance
Fertiliser
Weed Control
Pruning
Pest & Disease
Control.
Planting Out.
40 acres + 40 acres + 20 acres etc.
(1)
Total
240
acres.
40 acres +40 acres + 20 acres etc.
(1) (2) (3)
Total
240
acres.
40 acres +40 +20 +20 +20 acres etc.
(1) (2) 3
Preplanting
of 1st 40 acres.
Staff Recruit
Training
Extension
Leaflet.
Acquisition of
Equipment.
J F M A My Je Jy A S O N D J F M A My Je Jy A S O N D J F M A My Je Jy A S O N D
1966
1967
33%
1968
66%
100%

4. **Location of Project:**

With Headquarters at Savalalo near the propagating units - the planting sites will be variously located.

5. **Equipment:**

Project proposes that equipment and chemicals be purchased by growers at landed cost minus 5% subsidy. The latter to be met by Government.

Other than this, no capital equipment is required.

6. **Budget & Finance:** (1966)

(a) See "Budget Summary" sheet.

(b) **Personal Services** - same as proposed in Coconut Planting Project.

(c) **Travel.** Also covered in Coconut Planting Project and supplemented by Departmental normal routine travel.

7. **Buildings** - Nil.

8. **Contract & Sub-Contracts** - Nil.

All other Budget Items -

Transportation of Things -		
266 hours @ 15/- an hour =	£200	£ 200
Supplies:		
Fertiliser @ £15/acre/yr. for 80 acres.	£1,200	
Disease Control @ £2.6.6. for 80 acres.	£186	
Chemical Weed Control. For 1st year totalling £10 per acre for 80	£800	£2,186
Printing:		
Production & distribution of Extension Leaflet.		£ 100
		£2,486

Estimates For 1967

Maintenance of [illegible] acres			
Fertilisers @ £15/acre	=	£1,200	
Chemicals			
Bordeaux @ £2.6.6.	=	186	
Weeds Control @ £10	=	800	£2,186
Maintenance of new 80 acres as detailed above	=		£2,186
		Total for 1967	£4,372

Additional 80 acres maintenance for 1968 = £2,186 Total for 1968 = £6,558

Estimated Total Cost of Project to establish and maintain 240 acres of Cuttings = £13,416. (1966 - 1968)

Phasing of estimated required funds is similarly expected:

Year	% Expected	Estimated Funds
1966	33%	£2,486
1967	66%	4,372
1968	100%	6,558
		£13,416

V

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: AUGUST 1965	2. Department AGRICULTURE

3. PROJECT TITLE: AGRICULTURAL RESEARCH PROGRAMME, 1966-1970

4. DESCRIPTION OF PROJECT:

Attach separate sheets detailing the following:

(a) NEED

(b) OBJECTIVE(S)

(c) METHOD OF ACCOMPLISHING

(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY:

Title in Organization: EXPERIMENTAL OFFICER

6. DURATION OF PROJECT

1 JANUARY 1966
(Starting Date)

31 DECEMBER 1970
(Completion Date)

7. LOCATION OF PROJECT:

NAFANUA AGRICULTURAL STATION
AND OTHER EXPERIMENTAL AREAS

8. BUDGET SUMMARY

	Government of Western Samoa	Departmental Contribution	OTHER *	TOTAL
Salaries & Overtime	£1,687.10 0			£1,687.10.0
Local Travel*				
Overseas Travel	250			250
Office Expenses				
Furniture				
Publications				
Plant & Equipment	50			50
Instruments & Equipment *				
Buildings*		£ 500		500
Contracts*				
Other*				
TOTAL	£1,987.10.0	£ 500		£2,487.10. 0

* Please furnish additional details as requested in the Instructions.

PREFACE TO PROJECT PROPOSAL
AGRICULTURAL RESEARCH PROGRAMME 1966-70

It is accepted by the Department that this Department at present is not able, and will not be able during the next five years to support an itensive basic research program. However, it is considered that in these circumstances, that the Government must participate in appropriate regional research programs, and when necessary, to have short term investigation undertaken by overseas experts, if agriculture is to progress satisfactorily.

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1. a) Need:

In his soil survey of Western Samoa, A.C.S. Wright, formerly F.A.O. Advisor to the Department of Agriculture, wrote.

"In Samoa today there is urgent need for a quick and sustained increase in agricultural production. The problem is to achieve this without over exploiting the soil resources of the territory and without causing fundamental damage to the soil, which in the long run would leave the islands far worse off than present."

"Considerable increase in production could be achieved if both village farmers and private estates were persuaded to adopt a higher standard of management for their cash crops. It is mainly a matter of persuading farmers to accept, and apply conscientiously, standard practices of tropical farming, with emphasis on those practices that have already proven to be satisfactory in Samoa. Nevertheless, there are a great many agricultural questions, pertaining specifically to Samoa for which the answers are not known, or for which only part of the answer is known. There is obviously a need for a vigorous agricultural research policy."

" " Matters falling within the scope of such a policy include fertilizer trials to determine economic application for bananas and cocoa on the main soils, trials with legumes suitable as a ground cover for cocoa plantations : trials with deep mulching of bananas on poor soils near villages, using various kinds of tall grasses especially grown for the purpose, experiments with leguminous cover crops to replace bush fallow, experiments with grass ley in place of the bush fallow, experiments with bush fallow composed of selected tree species (balsa, for instance), trials with various legumes to find ways of maintaining them in grazed pasture land : trials with new crops - mainly those capable of high yields on soils of comparatively low

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1. Wright A.C.S. (1963). Soils and land use of Western Samoa. P.111-12. Govt. Printer Wellington.

fertility (including unacadamia nuts. oil palm, tea new varieties of citrus), and also grasses and legumes, suited to the poor, acid, soils of the uplands.

"It cannot be emphasised too strongly that local agricultural research is essential to the future development of the territory. Whereas the improvement of the existing agricultural extension services obviously has the first priority, it is nevertheless necessary and that some, at least, of the research projects be started as soon as possible for the answers will not be achieved in a single season in some cases four to five years experimental work will be called for."

"Even though the economy of the territory is severely strained at the present time, in view of the fact that the future prosperity of the territory depends so largely upon the early and intelligent investigation of many agricultural problems, every avenue should be explored for finance for agricultural research."

This statement summarises the need, it emphasises that results will only often be available after a considerable period, and indicates some aspects that will need investigation. To the ones mentioned, should be added the field of plant protection : it is well recognized that insects diseases and weeds cause major losses to our crops, and there is a continuing need for the investigation into the importance of these pests under Samoan conditions, and the testing of various control methods. This need in the past has been recognized partly by the employment, since 1957 of a professional entomologist.

b) Objectives:

The objectives of this project would be to provide for the setting up and staffing of a research and experimental section of the Department of Agriculture during 1966. This section then would be responsible for planning the development and work of this section in the 1966-70 period.

c) Methods of Accomplishing:

Apart from adequate finance, a program such as is proposed will require both facilities and staff.

1) Facilities - At present, existing Departmental experimental facilities are as follows.

(i) Entomologists laboratory at Savalalo and insectary at Nafanua.
(ii) Nafanua Agricultural Station, with sub stations at Vailima, Togitogiga, and Alaoa. These are largely plant introduction and demonstration areas.

As the emphasis of this research program will almost certainly be on field trials, rather than laboratory experiments, it is considered that emphasis should be placed on the development of facilities this type of work.

Discussing this matter Wright[1] commented as follows:

"None or very few of these research projects can be carried out successfully on village or privately owned land where one small careless action can render useless several years of scientific work, thus washing both time and money. What is needed is for one or more areas. covering a suitable range of soils, to be put aside specifically for experimental areas. The soil pattern of Western Samoa suggests that very good coverage of the main kinds of soil would be achieved if main research areas were treated along a strip running from near sea level to the uplands."

He states that "the results of the soil survey confirmed that Nafanua was a very useful site for agricultural experiments, since information gained there could be applied widely over the soils of a large part of northern and north-western Upolu, and part of north-eastern Savai'i. The survey also showed that the partly developed site at Togitogiga was highly suitable, since by extending research plots towards the uplands, the desired range of soils could be covered. Results of research at Togitogiga could probably be applied safely over most of the soils of the southern lowlands and foothills of Upolu and Savai'i, and also to a considerable part of the uplands of both islands."

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[1] Wright ACS (1963). op.cit. P.111

"With Nafanua and Togitogiga functioning as research centres, soils representative of about 60% of the soils of the territory of Western Samoa could be covered. The addition of a small station in the drier environment of Western Savai'i would, for all practical purposes complete the agricultural research needs of the territory.

In light of this, it would be in 1966 a major aim of the project to consolidate the Nafanua station as an experimental area, and to plan the further development of Togitogiga and an area in the Cornwall Estate in Savai'i. In addition consideration should be given to the purchase of further land adjacent to Nafanua. With these areas, and smaller areas at Lafi, Alaoa, Avele, Alafua, and Vailima adequate facilities for field experimentation would be available, This program would involve a considerable change in emphasis in the work of the Agricultural Stations. They would became primarily experimental areas, and the demonstration aspect of their activities would disappear. It is the Departments belief that the farmers own land, is the proper place for agricultural demonstrations.

As far as laboratory facilities are concerned, it is proposed that during 1966, the laboratory facilities at Savalalo would be transferred to Nafanua. By the end of 1969 it is expected that the facilities of the Rhinoceros Beetle Control Project will become available to the Department of Agriculture, and this together with any laboratory facilities at Alafua College should be entirely adequate for the Departments needs.

2) Staff - It is considered essential that any research section of the Department of Agriculture, be headed by an professional agricultural scientist, who has had considerable tropical experience in research in developing countries. It is therefore likely for the 1966-70 period at least, that this person would be an oversea appointment. Because of the nature of the experimental work required it would be appropriate if this officer was an agronomist, with research experience in at least two of our major crops. It is anticipated that other professional staff of the Department, particularly the Alafua staff would

undertake some experimental work, but it is essential that this is done under the overall direction of the head of the experimental section, who could be designated "Experimental Officer"..

The Experimental Officer would be directly responsible to the Director for all work undertake on Experiment Stations, and all other work carried out by members of his section. He would also be responsible for the overall direction of the Departments research program.

As it would be expected that the recruitment and appointment of this officer may take some months it will be necessary for the Entomologist to act as Experimental Officer for part of 1966.

The present Entomologists contract expires in January 1967 and during 1966 consideration will be given to the need for a further appointment. The appointment of a plant pathologist to the staff of Alafua College will strengthen the plant protection services of the Department.

In addition to the Experimental Officer, and the Entomologist it is suggested that a number of Agricultural Officers (Experimental) should be appointed. The posts suggested would be filled by existing Departmental Staff. It is proposed to appoint two officers to work in crop husbandry one of whom also would be farm manager at Nafanua, one to work in pest and disease control, and one to work in weed control.

It will be noted that in the above proposals that no attempt has been made to provide for staff in the following fields.

a) Grassland research - the importance of the field was recognized by the F.A.O. Mission, who recommended that an officer should be appointed to carry out research in this field. It would seem more satisfactory if consideration of the making of such an appointment, and the nature of the work required could be deferred until the position could be considered by the Animal Husbander to be appointed to Alafua College.

b) Forestry - as it is proposed to appoint a full-time forestry officer, it is considered that this section be left under separate control.

e) **Food-processing** - again as an appropriate officer is to be appointed to take charge of this specialised field, again this should not be brought under control of the experimental section.

In addition to these staff, it is recommended that Research Project Committee should be formed within the Department. This would consist of the Director, the Chief Agricultural Officer, the Prinicipal Alafua College and the Experimental Officer. The purpose of this committee would be to review on an annual basis all Departmental research projects, and to approve any new projects proposed.

During 1966 the Section would work according the following general plan;

a) Complete survey of existing experimental work carried on by the Department of Agriculture, and present them in a form of prjects suitable for review by the project committee.

b) Establish Nafanua Station as headquarters for the experimental section, and to organise the activities of this station as an experimental rather than a demonstration area.

c) Develop in the farm of well defined projects a research programme for 1967-70, for approval by the project committee.

d) Formulate an overall plan for the development of further experimental areas during 1967-70.

e) Continue where appropriate existing experimental work being carried on at the Agricultural Stations and by the Entomology Section.

d) **Benefits expected** - the general need for a research programme has been outlined above. Apart from helping to fulfill this need, the project should,

a) overcome the haphazard time and money consuming manner in which much of the experimental work is carried out at present

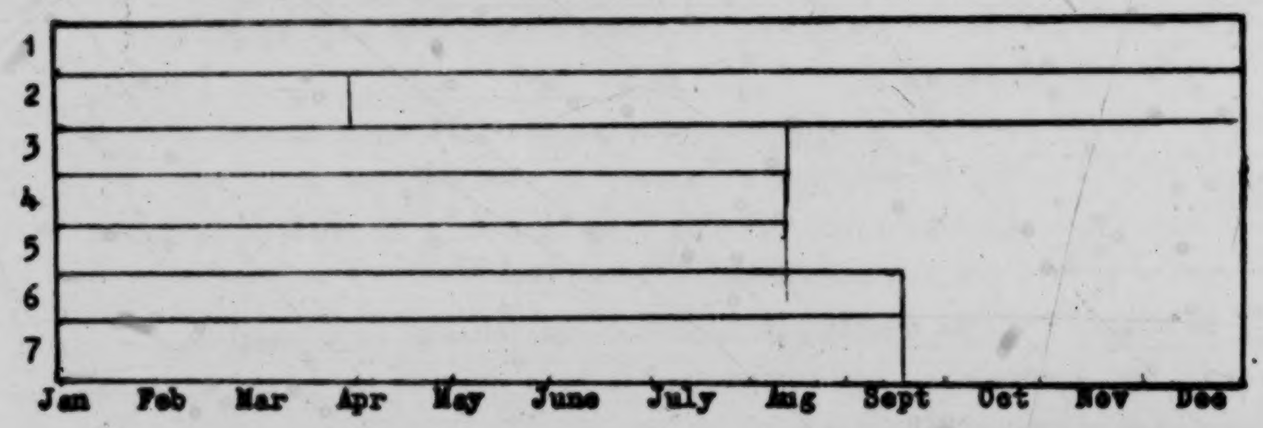
b) led to valuable personal supervision and training of young local officers by qualified and experienced staff so that the section they will be capable of continuing the work of the section once is established organised and a "going concern".

e) Oportunities for absorption of some of the graduate staff now qualifying overseas will be available.

3) Project to be Directed By: Experimental Officer.

4) Duration of Project & Sequence of Operations: For 1966 the following sequence of operations will be follows:

- i) Carrying out of experimental projects under action at present.
- ii) Recruitment and appointment of Experimental Officer.
- iii) Consolidation of Nafanua Station as Headquarters of Experimental Section.
- iv) Survey of existing Departmental Projects.
- v) Plan Departmental research programme 1967-70
- vi) Plan development of further experimental areas.
- vii) Approval of 1967-70 research programme by Projects Committee including review of existing projects.



5) Budget and Finance: In this outline I have only given details of items over and above those which would be required for existing Departmental Sections.

a) Salaries Overtime and Wages

Experimental Officer - 9 months @	£1125 p.a. = £1375.

b) Travel

Overseas travel for research staff (may be recoverable)	£250

c) Equipment

Furniture for Nafanua - say	£50

Renovation of existing offices and storeroom at Nafanua, construction of prefabricated building (materials on hand); removal of laboratory fittings etc from Savalalo.

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted	2. Department
	SEPT., 1965	AGRICULTURE

3. PROJECT TITILE: SMALL CROP DEVELOPMENT PROJECT

4. DESCRIPTION OF PROJECT:

Attach separate sheets detailing the following:

(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING

(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY:

Title in Organisation: SMALL CROP DEVELOPMENT OFFICER

6. DURATION OF PROJECT
1. 1. 1965 (Starting Date)
12. 12. 1966 (Completion Date)

7. LOCATION OF PROJECT.
AVELE COLLEGE, UPOLU.
ALAFUA COLLEGE, UPOLU.
SALAFAI HIGH SCHOOL, SAVAII.

8. BUDGET SUMMARY

	Government of Western Samoa	Departmental Contribution	OTHER	TOTAL
Salaries & Overtime & Wages	840	-	-	840
Local Travel*	-	-	-	-
Overseas Travel	-	-	-	-
Office Expenses	-	-	-	-
Furniture	-	-	-	-
Publications	150	-	-	150
Plant & Equipment	-	-	-	-
Instruments & Equipment*	70	-	-	70
Buildings*	-	-	-	-
Contracts*	-	-	-	-
Other*	730	-	-	730
TOTAL:	£1,790	-	-	£1,790

*Please furnish additional details as requested in the Instructions.

GOVERNMENT OF WESTERN SAMOA

Department of Agriculture

ECONOMIC DEVELOPMENT PROJECT PROPOSAL

SMALL CROP DEVELOPMENT PROJECT

1. Description of Project.

(a) Need:

Authoratative views have given way to a general widely recognised concept of the need to foster and organise the growing and marketing of other small crops besides Coconut, Cocoa and Banana. The produce display in the open and in shop verandas is undeniable evidence of the potential and the results of present disorganised small crop growing. This endeavour has been almost entirely without Government assistance.

Recognition was made by the Produce Marketing Division when a selection of produce found overseas market. Export of minor produce had a modest start until last year when with improved marketing organisation, overseas earnings was estimated to be £16,000. Notably taro, mangoes, coconuts, annatto, avocado, pawpaw, and vi were amongst the higher "earners." This year from 1st June to 30th June some £37,000 so far represents the total f.o.b. value of small crop exports. Only a small minority of produce is exported and although no estimation is made of local sales, it is firmly established that it is considerable. To give an indication of the turnover in the Vegetable Garden Projects amongst the Women's Committees of Savai'i a total of £400 from lenient sales within the villages from land estimated to be no more than 3 acres. On the whole, small crop growing is just emerging from the subsistent level. The lack of technical advice has led to the use of local seeds or overseas supplies primarily from temperate land. There is no proper cultural foundation in seed nurseries, preparation of planting sites, transplanting, pest and disease control. The present acquired skill in vegetable growing has resulted from poor emulation of local Chinese management. This influence has to a degree localised vegetable growing to areas such as Aleisa, Tanumalala and to a certain extent Tutulele. Almost without exception small crop establishment is dependent on virgin land due to the lack of crop rotation "know how". The resultant effect is the resort to move into the distant interior at increasing expenses.

In the tobacco field, localised skill is found at Leauva'a where the Department had successfully operated a Tobacco growing campaign. Unfortunately, this was short-lived and lacking following up, has been now abandoned.

In the limited field of fruit crops, apart from original introductions of mangoes, magosteen and ramboutan, at Noamoa/and an isolated successful grapefruit orchard at Vailima, trees are owned in ones and twos by well dispersed families. These are inevitably self sown and/or chance survivals. All lack proper culture and assistance from the Government.

Of those who viewed the need to organise the small crop industry (e.g. Gerlach Tropical Agriculturalist, N.Z.D.A.; Tiller, Assistant Secretary N.Z.D.S.I.R.; V.D. Stace, formerly S.P.C.'s Economist; C.S. Wright and others) perhaps Messrs Lauterbach and Stace in there "Economic Survey and Proposed Development Measures for Western Samoa" could aptly express this need:

"Greater diversification of agricultural production is highly desirable from the view point both of domestic and of export possibilities. .... A number of crops which are grown on a small scale chiefly for domestic consumption should be expanded or more fully utilised. This includes sugar cane, kapok, mangoes, pawpaws, avocadoes, citrus fruit, pineapple, tobacco, eggplants, and black pepper. Sweet corn, rice, hemp, vanilla and macadamia nuts are other possibilities which should be explored systematically by specialists". [pp. 14-15 para 43 & 44]

The potential has been assured. The need is to set the small crop industry on technically sound grounds.

Prior to opening this work to the public, it is suggested that as little is known on costs of production, yields, expected turn over, that the Small Fruit Crop Development proposes to grow potential crops in three well-selected sites at planting scales significantly large enough to derive the required information. These sites are:

Avele Agricultural College, in Upolu.
Alafua Tropical Agricultural College
also in Upolu; and
Salafai High School in Savai'i.

It is expected that when the information is supplied, that separate leaflets on culture be produced to assist growers. Further, as the majority of these crops are short term, it will be possible to produce a tangible plan for the planters early in 1967. The leaflet should be contained relevant information on :

Choosing suitable sites.
Nursery Management where necessary
Pre-planting Preparation.
Suggested Crop Rotation.
Post planting Practices e.g.
fertiliser application
Pest & Disease Control, other
practices peculiar to the crop.
and Costings of all these phases.

The Department's Agricultural Station at Nafanua has had valuable introductory experience with most if not all of the crops mentioned. It is however, regrettably that there are no records to provide for these requirements on probable costings and expected yields. Hence pepper, Solo papaya, pineapple, eggplants and avocadoes are known to have potentials but have had limited distribution to growers.

The type of assistance required varies with the crop. Essentially, where planting materials are not available locally, these should be introduced from known overseas sources. Technical advice should be sought on culture with a view to adaptability by Samoans especially for reasons of economics and availability of material. Within this scope, use of minimum requirements of equipment and chemicals should be fostered at village level.

(b) Objectives:

This project aims at presenting a comprehensive plan for producers who grow small crops. Technical advice on WHAT, HOW and WHEN of efficient small crop production will be main contents of this project. Meanwhile, the project primarily has the objective of finding out the costs of production, the ideal methods of production and expected profitability. Using institutions with agricultural biase, the work can immediately have direct benefit to students. This is not research work but an essential field trial into the economics of individual crops considered to have potentials for local and overseas markets. While it is desirable that the work be located at Nafanua, it is felt that land is not adequate, aside from its crop introduction use. Some free labour in the form of students can be provided, produce also can be locally consumed but all have to be accounted for, for the purpose of costing. The end product from these field operations is the series of comprehensive leaflets explaining how the crops are grown, protected, harvested and marketed, what to plant and where, and when it is to be planted. This preliminary step is thought to be the most economic and informative approach towards ultimately organising the small crop industry on more technically sound and profitable basis.

It is estimated that from an acre of intensive market gardening £200 per acre can be expected as a reasonable turnover.

(1)	Avele College	- 3 acres @ £200/acre	= £ 600.
(2)	Alafua	- 5 acres @ £200/acre	= 1,000.
(3)	Salafai	- 5 acre @ £200/acre	= 1,000.
			£2,600

(c) Method of Accomplishing:

Crops that have been recommended by the Manager, Produce Marketing Division as having potential local and overseas market are the following:

OVERSEAS

(A) Short Term

- Ginger
- Tobacco (Tokelau Is.)
- Sweet Pepper
- Beans for winter
- Black Pepper
- *Sugar Cane

LOCAL

- Radish
- Beans
- Carrots
- Tomatoes
- Melons
- Ripe Bananas
- Cucumber
- Chinese Cabbage
- Pineapple etc.

(B) Long Term

Mangoes
Avocado
Solo Papaya
*Nutmeg
*Annatto
Vi

Also for local consumption.

*Adequntely catered for in present services, and/or other project proposals.

The following is the broad outline of procedure:

. Operation	Responsible Agent
1. Purchase of Planting Material (Local & Overseas)	Department of Agriculture
2. Preliminary propagation	" " "
3. Distribution to the 3 Sites	" " "
4. Planting to Harvesting	Agricultural sites under general supervision of Department of Agricultural.
5. Marketing	Produce Marketing Division.
6. Recording of all phases especially economics of individual crops and management.	Staff of the 3 Institutions.
7. Production of Leaflets on individual crop management.	Compiled by Agricultural Officer.

Purchase of Planting Material:

Vegetable Crop Seed - Virtually all has to be supplied from overseas guided by the Department's experience on selected varieties to place on order. The following sources have been found suitable.

(i) For vegetable seeds:

1. Honolulu Seed Company.
2. 'ASGROW' Milford, U.S.A.
3. Burpee's Company, California.
4. 2 Seed Suppliers of Japan.
5. Other tropical sources.

(ii) For tree crops:

Citrus: Recently, the Department has established a small block of imported budded stock from California. These are well on their way. It is suggested that as well as this source, Queensland, Cook Islands and other Pacific Islands should be included as possible suppliers.

Avocado

Mangoes

Nutmeg

Vi

Supplied principally locally but will need some fresh stock from overseas particularly newly developed dwarf mangoes.

Vegetative propagation of nutmeg, mangoes and avocado to ensure a 'true' breed must be tried out in the light of experience at West Indies and other tropical centres.

High quality mangoes at Moamoa can be propagated this way to overcome seedlings from crosses undermining some desirable fine characteristics.

At the same time, the three planting sites can be prepared for planting.

All phases from planting to marketing must be recorded.

Apart from assistance from Agriculture Department in placing orders, providing some technical advice, finding markets, no other departmental assistance will be required.

Special attention should be paid to crops that are relatively new to Western Samoa e.g. ginger, black pepper, and those requiring improved management e.g. all vegetable and tree crops.

In the production of the leaflet on individual crops, illustrations should be generously afforded. Government Printing Office will be required to do the printing.

Leaflets should be sold at nominal costs to growers

Staff and Salaries:

Crop husbandary teachers over all supervisors at each site - should be given in addition to their normal casual staff - 1 (one) Field Assistant each, recent graduates of Avele Agricultural College - as trainees. Starting salaries will be at £160 p.a. total £480. The following are nominated as Small Crop Development Supervisors.

Avele College - Mr S. Jackson
Alafua " -
Salafai High School - Mr M. Webb (Principal)

To further assist their establishments each site should have a casual labourer.

200 man days @ 12/-	= £120.
for 3 sites	= £360.

Quarterly Phasing:

1st Quarter 1966

Appointment 3 Graduates, 3 Casuals.
Purchase of planting material.
Preplanting preparations of 3 sites.
Recording.

2nd Quarter 1966

Planting of all short term crops.
Maintenance.
Pre-planting preparation for tree crops.
Recording.

3rd Quarter 1966

Maintenance of short term crops.
Planting Out of Tree Crops.
Harvesting starts.
Recording.

4th Quarter 1966

Complete Harvesting of Crops.
Recording.
Production of leaflet.
Maintenance continue of Tree Crops.
End of Project.

(d) **Benefits Expected:**

With a capital outlay of £1,790 direct income is estimated at £2,600.

Technical knowledge can directly benefit students, staff and closely associated people estimated at 500. Indirectly as a result of the distribution of leaflets as well as supervision by Agriculture Department, it is estimated that some 6-8,000 people will have better knowledge of their occupation as small crop farmers.

The re-organisation of the Produce Marketing Division will benefit this project in better marketing arrangements.

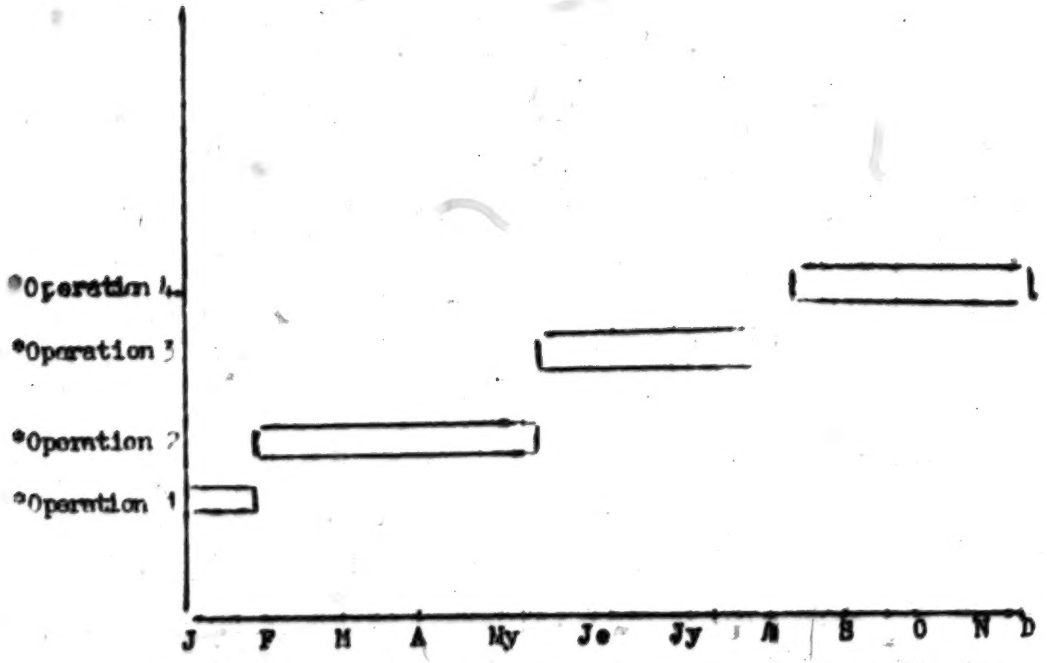
As vegetable growing is generally expected to start in March/April, it is urged that this project start on January, 1965 to ensure adequate preparation, staff and equipment before the growing starts.

At the completion of the project, the three Field Assistants Small Crop Development Trainees are to join the Extension Division continuing their work amongst the public. Two to work in Upolu, one in Savai'i.

Tree Crops can be maintained at the three sites. Recording should be continued.

2. **Project to be Directed by W.F. Meredith, Agricultural Officer, Savai'i:**

3. **Sequence of Operation - Bar Chart:**



*For details of operation see 1 under **Quarterly Phasing.**

4. **Location of Project:**

Avele and Alafua College in Upolu.

Salafai High School, Savai'i.

5. **Equipment:**

This project is primarily aimed at assessing the practicability of improved husbandary of small crops **within the means of average Samoan growers**. As such, equipment used will be restricted to hoes, rakes, crowbars, spades, picks and the likes.

There is however, no need to totally restrict the use of tractors that are already in use in the schools so long as their work can be converted in terms/of man hours worked by a grower with only hand implements. For this reason and for the more progressive farmers, it is recommended that a rotarary hoe be purchased for the project. Estimated cost is £70. £ 70

6. **Budget & Finance:**

(a) Budget Summary - see top sheet.

(b) Personal Services -

3 P/A trainees at £160 p.a. = £480

600 man days @ 12/- per diem = £360 £840

(c) **Travel**: Already included in Department's Travel Vote Allocation i.e. routine travelling.

7. **Buildings:** nil.

8. All other Budget Items:

Propagation of Local Planting Material	£ 50	
Purchase of Seed & Seedlings from overseas	£200	
Fertiliser	350	
Printing	150	
Transportation of Things	50	
Tools	50	
Sundries	30	£ 880

Total: = £1,790

Phasing Estimates:

1st Quarterly - all funds are required for purchase of equipment, initial outlay, maintenance etc.

Conclusion:

It is assured that there is no intensions of duplicating the basic work of the Department. Clearly, a few of the crops have been introduced and visibly successfully grown. No records of yields and husbandary was kept. A larger scale planting is deemed necessary for assessments of agronomic and economic factors. Conclusively, the alternative sites are chosen to fulfill this purpose and to provide for the practical requirements of agricultural students.

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GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: SEPTEMBER 1965	2. Department HEALTH

3. PROJECT TITLE: RURAL HEALTH PLAN

4. DESCRIPTION OF PROJECT:
Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: DIRECTOR OF HEALTH
Title in Organization:

6. DURATION OF PROJECT: 1 JANUARY 1966 (Starting Date) 31 DECEMBER 1970 (Completion Date)	7. LOCATION OF PROJECT: RURAL AREAS OF WESTERN SAMOA

8. BUDGET SUMMARY 1st YEAR

	Government of Western Samoa	Departmental Contribution	OTHER*	TOTAL
Salaries & Overtime	880			880
Local Travel*				
Overseas Travel				
Office Expenses				
Furniture				
Publications				
Plant & Equipment				
Instruments & Equipment	7,155			7,155
Buildings*	13,000			13,000
Contracts*				
Other*	160			160
TOTAL	21,195			21,195

* Please furnish additional details as requested in the Instructions.

RURAL HEALTH DEVELOPMENT PLAN

DESCRIPTION OF PROJECT:

(a) NEED

The population of Western Samoa (WS) as at the end of 1965 is approximately 130,000, which from public health point of view can be divided into:

Apia urban and sub-urban area, roughly 40,000 inhabitants
Rural Upolu with roughly 54,000, and
Savai'i, all rural, about 36,000.

The Apia urban and sub-urban area is served by Apia General Hospital (AGH), and is not considered as rural area.

Savai'i has a more densely populated area in the South-East with about 16,000 inhabitants, with Salelologa as the natural centre.

With the present rate of population increase (1956-1961 average 3.9% per year), the population will increase by about 20% from 1965 to 1970. The population in the rural areas as at 1970 can then be estimated to 60,000 for Upolu and 44,000 for Savai'i. These figures could be used for a short term planning, while for long term planning it is recalled that the population is estimated to be doubled by 1990.

To maintain the present standard a 5% annual increase in health services is needed. The present standard, however, is not considered satisfactory and as no significant increase in the Health Budget has been accomplished total expenditures are equal to £280,000 in 1965, a slow declination of the services, especially in the rural areas, has not failed to realize. This indicates the urgency for improvement of rural health services. For an upgrading of standards a considerable increase of the health budget must be counted with. However, several reorganisational undertakings in public health to improve services, can undoubtedly be carried out at relatively low costs.

The medical personnel in rural health services consists of 13 Fiji-trained doctors, 17 hospital staff nurses, 19 district nurses and 19 nurse aids. Two locally trained dentists are at present stationed in rural hospitals. All the nurses are locally trained in Apia. The present medical training as a whole, ensures a sufficient number of personnel available for implementation of the rural health plan.

The personnel is scattered over the rural areas, and in no place two doctors are working together. Team work does not exist, and the personnel is strongly hampered by lack of transportation. Furthermore, the roads are often in bad condition, leading to difficulties for transport of medical personnel and sick people. Because of this, thepersonnel is not efficiently utilized.

The present rate in rural areas is one doctor for 6,000 and one district nurse for 4,000 inhabitants. As a result of the population increase one new post for a district medical officer (DMO) and two new posts for district nurses (DN) are required if the present standard are to be maintained.

Lack of personnel and proper supervision are additional impedements on health service in rural areas. This is especially true for Savaii.

The rate of hospital beds per capita varies in South Pacific territories from 2.7 per 1000 inhabitants (Tonga) to 10.1 (Cook Islands). The new hospital planned for American Samoa has 150 beds, making 6 beds per 1000 inhabitants, if a few beds in the rural areas are not included.

The need for hospital beds in a country with health problems like Western Samoa could be estimated at a rate of 5 beds per 1000 inhabitants. The present number of beds in Western Samoa is 600 of which 275 at the Apia General Hospital and 325 in rural hospitals, making together about 5 beds per 1000 inhabitants. However, as an average only 25-30% of the rural hospital beds are utilized over theyear, indicating that the population is not satisfied with the present standard. Many rural patients go on their own to Apia General Hospital for treatment, which could sufficiently be given - and in a less expensive way - at a modern rural hospital. The minimum standard for a hospital today would be a team of two doctors and x-ray and laboratory facilities.

The transport difficulties considerably reduce the number of home visits to sick people and the transportation of sick people for care in hospitals. In order to solve the transport problem with the present organizational structure, with many small units scattered over the country, many vehicles are required. This can only be met at excessive costs.

In the rural areas there will always be a need for medical personnel taking care of emergency cases as well as the treatment of less serious cases, home visits to sick people. Furthermore for all preventive activities like control of communicable diseases, mother and child and school health, immunization programmes, environmental sanitation, and finally for administration and supervision of medical and health activities in the district. Thus, we should count with one district medical officer for each 5,000 and one district nurse for each 2,000 inhabitants. With the scope of medical problems facing Western Samoa much medical energy should be devoted to preventive activities. Much of this work can be carried out by nurses.

There has been a tendency in Western Samoa to increase the number of rural hospitals yet more. Even the present situation is not mastered, as four rural hospitals are not staffed with doctors, and consequently no proper treatment can be offered in these places. In the past planning of hospitals has been initiated by the villagers, but modern public health planning must be done on a wider scale and on national level in order to avoid waste of money, to secure the best use of personnel and ensure the best medical care.

Because of lack of statistics it is at present impossible to prove that the treatment results are better in a bigger unit like Apia General Hospital than in rural hospitals. It is, however, evident that Apia General Hospital offers seriously sick a better chance with its team of personnel, facilities for examinations and treatment. This is the prime reason for a trend, all over the world, to concentrate curative medicine to upgraded units.

Although the districts finance a large share of the construction cost of new hospitals, a greater share of the costs is paid by the Government. This includes not only the buildings, but also the cost of machinery and equipment, salaries to doctors, nurses and other employees. During 1965 about £80,000 was spent on the district hospitals, though it should be realized that the total health expenditure in rural areas are actually much higher, because many people had to be treated in Apia due to lack of proper facilities in the rural districts.

With regard to several factors and due to the present unsatisfactory situation mentioned above, the rural health development is given highest priority including better hospital facilities for Savai'i.

The plan presented for Rural Health Development will eliminate the problems mentioned. Teams of medical personnel at some upgraded rural hospitals, and modern transport facilities will offer a high standard health service in rural areas. Moreover, the plan offers a fairly inexpensive solution of the problems.

The assistance requested for the plan will include new personnel, transport units, equipment and buildings.

International organizations are known to be interested in a development along the lines described, and a favourable attitude with respect to assistance, for example, for the purchase of vehicles, laboratory and x-ray equipment, training of personnel, could be expected if requests are done. International funds earmarked for the South Pacific for development of this kind already exist.

The need for public health development in Western Samoa has been recognized. Implementation of new plans requires additional funds and efforts and also some change of existing patterns and systems. One cannot have changes and no changes at the same time.

(b) OBJECTIVES

The rural health plan is designed to improve social services. Hence its objectives cannot be measured in terms of direct additional employment and income. Obviously a plan that aims at improving the health of the Samoan population is closely related to the economic welfare of the people, because every additional healthy Samoan is able to earn his own living or attend school.

The direct objectives are the following:

1. The plan will improve the quality of medical and preventive care in all rural areas.
2. The rural population will be given the same service and chance when sick as the urban.
3. The plan will ensure speedy transportation of patients and medical personnel, ensure home visits and a better utilisation of qualified medical personnel.
4. The plan will facilitate the most economic use of modern equipment, machinery and transport units.

Principal aims for the plan are the following:

1. Concentration of hospital care (inpatients) to qualified hospitals, ensuring the same service and standard for rural and urban population, independent of the residence of the Samoans.
2. Upgrading of three hospitals on Upolu and three on Savai'i, and providing those hospitals with teams including, inter alia, two doctors, modern x-ray and laboratory set-ups and transport facilities.
3. Strengthening the rural health services by appointment of a principal medical officer for Savai'i, and new positions for district nurses.
4. Providing Savai'i with a main hospital.
5. The development should go step by step, avoiding unnecessary disruption of existing system, set-ups and pattern, and also to acquire necessary experience with a new system and to convince the rural population of the value of it.

(c) WAY TO ACCOMPLISH

In order to understand the changes that are contemplated in rural health, it is worthwhile to briefly examine the existing situation.

Apart from Apia General Hospital there are at present eleven hospitals on Upolu, of which four are not staffed with doctors. Six hospitals are on Savai'i. The hospitals are staffed with the district medical officers and serve between 850 and 11,500 people each. Some of these hospitals constitute uneconomic units as they serve a limited number of people.

The hospitals suggested to be upgraded in a first five-year period are:

Poutasi or Fusi hospital,

Fagamalo or Safotu hospital.

In the densely populated Salelologa area a new hospital should be constructed, located in the centre of the region. The hospital should be planned for future upgrading to a main hospital with 100 beds for Savai'i, but in the first five-year period it should be staffed and run as an upgraded rural hospital, a two-doctor station with additional assistance by a Principal Medical Officer (PMO) for Savai'i stationed at this hospital. Land has been made available by the district and is suitable for a 100 bed hospital and eventual extension in the future. Some other health activities are planned to be stationed at Salelologa, for example a meat inspector, a supervisor for the district nurses, which would secure an intimate cooperation between health activities, and the best utilisation of personnel, equipment and transport facilities.

The principal medical officer for Savai'i should act as liaison officer between the medical personnel and the Health Department.

Dentists are already stationed outside Apia General Hospital at Lefaga and Sataua hospitals. No health inspectors are at present stationed outside Apia.

The following plan of operations is recommended for 1966-1970:

STEP 1. Poutasi hospital will be upgraded to a two-doctor hospital, with improvement of examination and treatment facilities and provision of a motor car. Accommodation for two doctors is already available in Poutasi, as the station has for a period in the past been staffed with two doctors. Necessary action will be completed as at July 1966.

STEP 2. A Principal Medical Officer will be appointed for Savaii. He will be stationed at the hospital. This will be developed to a main hospital for Savaii and function as mentioned above. For some years to come he will also act as senior medical officer of this hospital in addition to his duties as supervisor etc., for the whole island. He will be equipped with a motor car. Necessary action will be completed in January, 1967.

STEP 3 Fagamalo hospital will be upgraded to a two-doctor hospital in the same way as in Poutasi. Necessary action will be completed in January 1967.

STEP 4 Construction of a new hospital in the Salelolog area on Savaii, preferably in Salelologa itself. The hospital will start as a two doctor station but be planned for and successively be upgraded to a main hospital for Savaii. The Principal Medical Officer will be stationed at this hospital, acting at the same time as senior medical officer for this hospital. His car will be shared between him and the hospital. In the Salelolga area there is already an x-ray set-up for tuberculosis control, which can be utilised by the hospital. The tuberculosis control project is also stationed here with a portable x-ray machine, a transport car and medical officer in charge of the tuberculosis control on Savaii. Necessary action will be completed in January 1968.

All upgraded hospital should as a minimum have two doctors, two staff nurse aids. One doctor will act as head of the hospital. His qualifications include extensive practical experience and Certificate in Public Health. Each station will be equipped with an x-ray set-up and with improved laboratory facilities. The car will be used for transport of sick people, and medical personnel for home visits, nurses for village clinics, immunisation programmes, school health service etc. The cars will be driven by the doctors themselves.

STEP 6 A health inspector stationed at Satoua hospital. Necessary action will be completed in January 1967.

STEP 7 A dentist stationed at Aleipata hospital. Necessary action will be completed in July 1967

STEP 8 A health inspector stationed at Aleipata hospital. Necessary action will be completed in July 1967.

STEP 9 A dentist stationed at Salelologa hospital. Necessary action will be completed in January 1968.

STEP 10 A health inspector stationed at Salelologa also incharge of meat inspection for all of Savaii. Necessary action will be completed in January 1968.

STEP 11 A pharmacy branch opened at the hospital at Salelologa and staffed with a locally trained pharmacist. Necessary action will be completed in January 1968.

STEP 12 Appointment of three new district nurses annually with priority given to the districts with the greatest population, according to decision by the director of Health.

Summary of the total increase of personnel, equipment and buildings during 1966-1970: (only the rural areas are counted with)

Personnel/Salaries	**Present 1965**	**Addition**	**Final 1970**
Doctors	13	5	18
Staff nurses at hospital	17	4	21
District nurses	19	12	31
Nurse aids	19	4	23
Dentists	2	(3) fr. AGH	5
Health inspectors	0	(3) fr. AGH	3
Pharmacists	0	(1) fr. AGH	1
Transport/Travel			
Cars	2	3	5
Equipment			
X-ray machines	1 (TB progr)	2	3
laboratory	13^x	(2) improved 1 new set-up	14
Instrument set-ups	13^x	(2) improved 1 new set-up	14

Buildings	**Present 1965**	**Addition**	**Final 1970**
Hospitals	17	(2) upgraded 1 new Constr. xx	18 xx
Accommodations			
for doctors	13	5	18
for nurses	36	16	52
for nurse aids	19	4	23
for dentists	2	3	5
for pharmacist	0	1	1
for health inspectors	0	3	3

x/ all unsatisfactory at present

xx/ four of these at present used only as dressing stations.

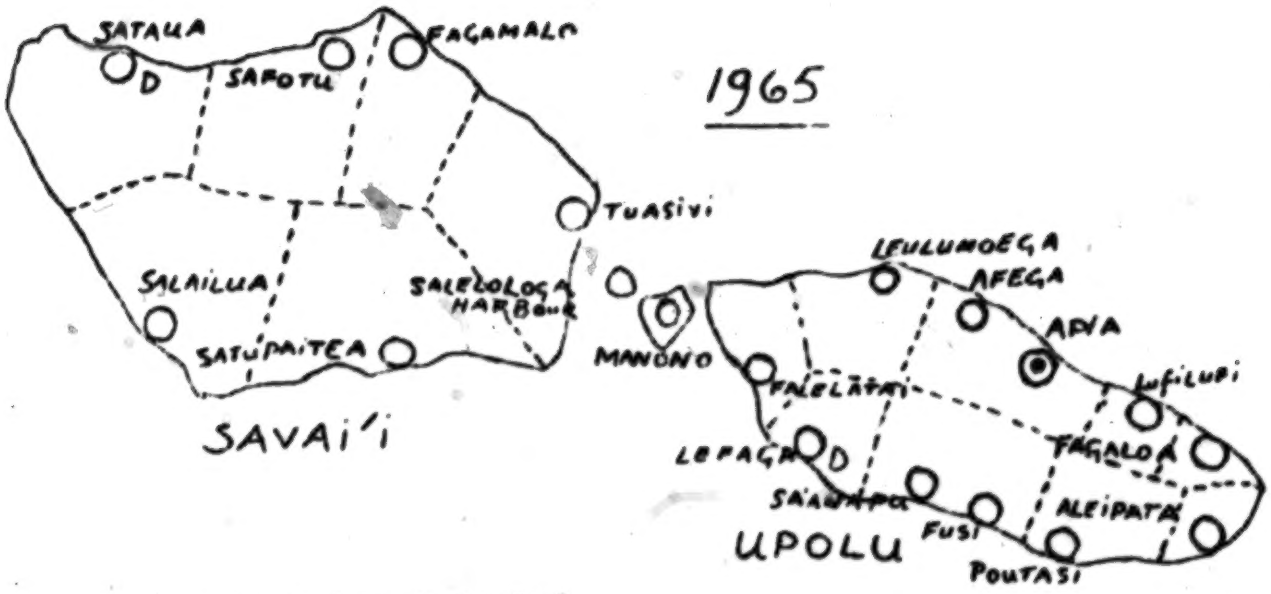
See page 10 for map indicating situation before and after implementation of the Plan.

(d) **BENEFITS EXPECTED**

1. Improvement of all medical and health services for the rural population. Medical teams will ensure efficient and up-to-date care of sick people.
2. The same service will be offered to all people whether they are living in rural or in urban areas, on Upolu or on Savaii.
3. The plan will result in lower morbidity, lower mortality, including infant and child mortality, extended expectation of life, better health and working capacity, in its turn resulting in development in other fields.
4. The plan is expected to satisfy the rural population, which do at present not accept the rural health standard.

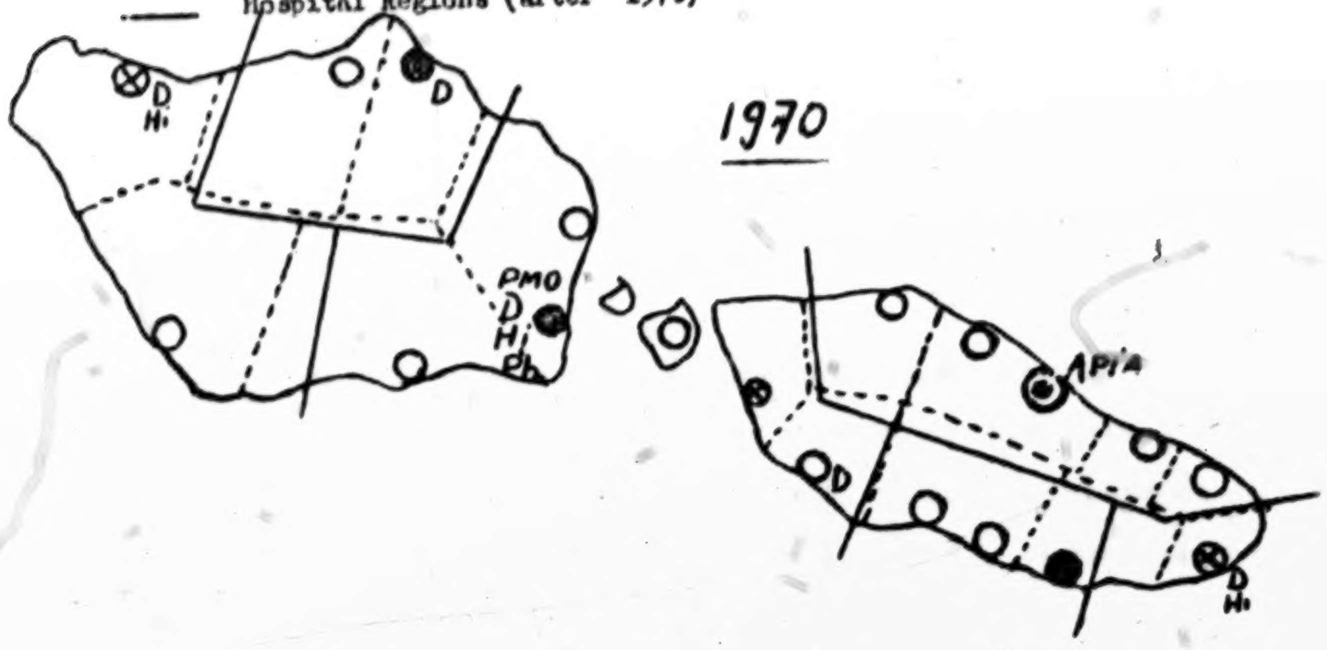
Rural hospitals not upgraded under the plan will for some years to come offer the population many beds for routine treatment. Hospitals, however, where no doctor is stationed should not be utilized as hospitals, but patients should be referred to nearest upgraded hospital.

The present system of health districts will be kept, and one of the doctors at each upgraded hospital will be responsible for the district work and its medical personnel. From point of view of hospital care the country will be divided in region, one for each of the upgraded hospitals. Apia General Hospital and the planned main hospital on Savaii will act as region hospital for the region in which they are located and as specialist


1965

SATAUA
D
SAFOTU
FAGAMALO
TUASIVI
SALAILUA
SALELOLOGA HARBOUR
SATUPAITEA
SAVAI'I
MANONO
LEULUMOEGA
AFEGA
APIA
LUFILUPI
FALELATAI
LEFAGA
D
SA'ANAPU
FAGALOA
ALEIPATA
FUSI
POUTASI
UPOLU

⊙Apia General Hospital
○District Hospital
●Hospital upgraded or constructed 1966-1970
⊗Hospital suggested for upgrading 1971-1975
PMO=Principle Medical Officer for Savaii
D=Dentist
Hi=Health Inspector
Ph Pharmacist
----- Health District
—— Hospital Regions (after 1970)


1970

D
Hi
D
PMO
D
Hi
Ph
APIA
D
D
Hi

hospital for their respective island. Apia General Hospital will for several years to come probably serve as specialist hospital for some specialities which can not be expected to be cared for in Savaii and as training centre for all Western Samoa.

Development 1971-1975 As this step is not planned in details, it will only be mentioned what development could be foreseen for a second five-year period.

The Salelologa hospital upgraded to a main hospital to Savaii with 1000 beds and one university trained doctor trained in surgery. More staff nurses and nurse aids will then be added, as well as locally trained x-ray and laboratory technicians.

A principal district nurse for Savaii and a principal medical officer for Upolu.

Transformation of Aleipata and Sataua hospitals to two-doctor hospitals. Appointment of health inspectors for Falealili. Poutasi and Fagamalo and appointment of four new district nurses per year.

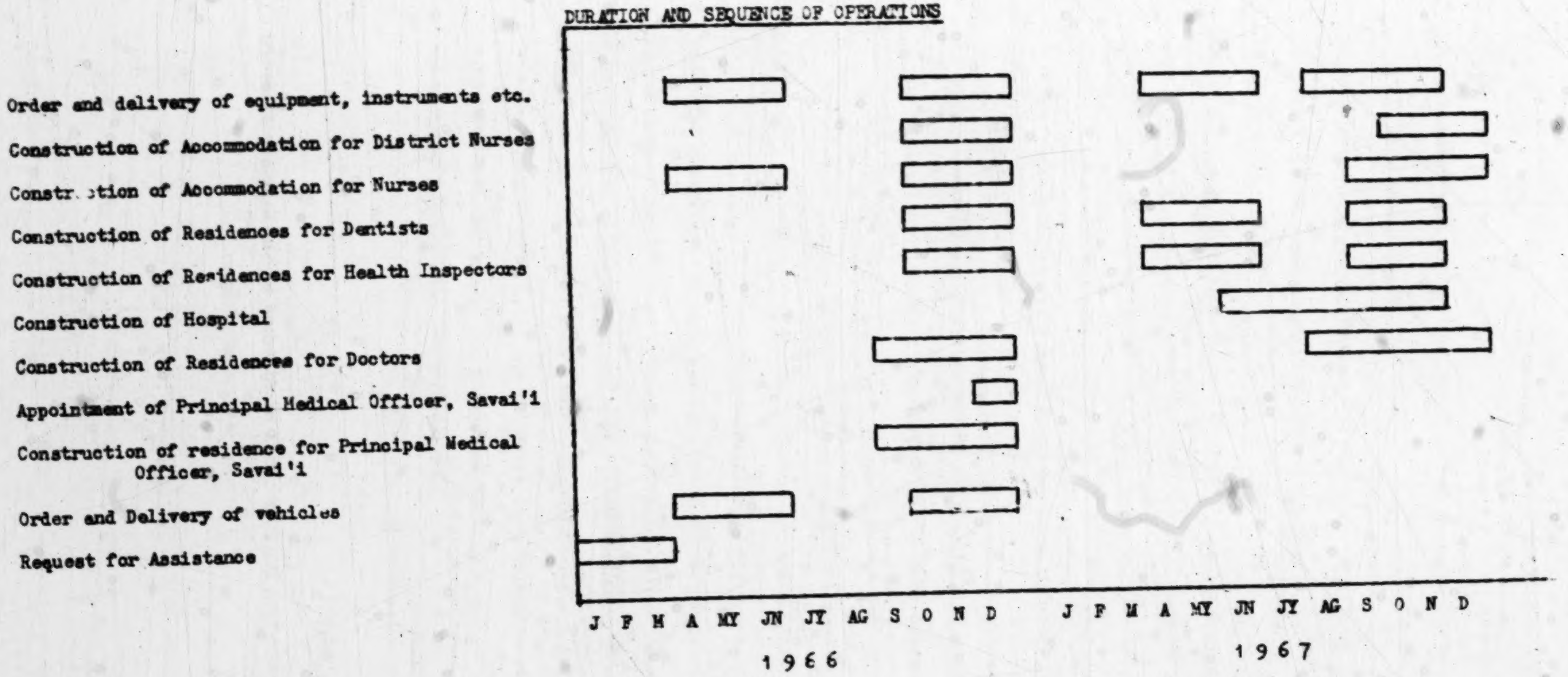
If the programme, including a second five-year period, is followed, Western Samoa will increase the number of rural district nurses from 19 in 1965 (rate 1/4000) to 41 in 1975 (rate 1/3000).

The ultimate goal for a country with the size and population structure of Western Samoa would be for one general hospital on Upolu and one for Savaii in the most densily populated area. When the population is doubled there will probably be a need. for two hospitals of this kind on each of the two islands. The two hospitals mentioned will cater for the total need of hospital beds and the district health work will be carried out by one DMO for each 5000 inhabitants and one DN for each 2000 inhabitants, both working together in teams at rural health centres.

PROJECT TO BE DIRECTED:

The Rural Health Plan will be directed by the Director of Health.

DURATION AND SEQUENCE OF OPERATIONS



LOCATION OF PLAN:

The Plan is designed for the rural areas of Western Samoa.

BUDGET AND FINANCE:

Only increased costs through implementation of the Plan are shown below. Salaries are maximum salaries as f 1966. For the cars a mileage of 10,000 per year and car is counted with and a cost for maintenance and fuel of 8d. per mile. For the Salelologa hospital construction cost per bed will be roughly £2,000 (including buildings, furniture, linen, laboratory and surgical instrument) related to the x-ray machine belonging to the TB control Programme will be utilized by this hospital. Initially a 50 bed hospital, (with 4 wards and 4-5 other rooms) will be constructed. Plans will be for a 100 bed main hospital. Extension will be added after 1970.

Step 1 (Poutasi):	Investment £	Maintenance (per year) £
Salary for one doctor	-	1,295
Salary for one staff nurse	-	335
Salary for one nurse aid	-	125
One motor vehicle	1,200	320
X-ray set-up	1,200	-
Improved laboratory equipment	150	-
Improved laboratory instruments	200	
Accommodation for one staff nurse) Accommodation for one nurse aid)	1,500	

Step 2 (Princ. Medical Officer):

Salary for one doctor	-	1,295
One motor car	1,200	320
One typewriter	55	-
Accommodation for one doctor	2,000	-
Office Expenses		30

Step 3 (Fagamalo):

Salary for one doctor	-	1,295
Salary for one staff nurse	-	335
Salary for one nurse aid	-	125
One motor car	1,200	320
X-ray set-up	1,200	-
Improved laboratory equipment	150	-
Improved instruments	200	-
Accommodation for one doctor	2,000	-
Accommodation for one staff nurse) Accommodation for one nurse aid)	1,500	

Step 4 (Salelologa):

Salaries for two doctors	-	2,590
Salaries for two staff nurses	-	670
Salaries for two nurse aids	-	250
Linen for 50 beds	-	2,500
A 50 bed hospital including all equipment	100,000	
Accommodations for two doctors	4,000	
Accommodations for two staff nurses) Accommodations for two nurse aids)	2,500	

	Investments	Maintenance
Step 5 (Dentist in Fagamalo):		
Instruments (complete set)	400	-
Accommodation for a dentist	1,500	
Step 6 (Health Inspector in Sataua):		
Accommodation for a health inspector	1,500	
Step 7 (Dentist in Aleipata):		
Instruments (complete set)	400	-
Accommodation for a dentist	1,500	
Step 8 (Health Inspector in Aleipata):		
Accommodation for a health inspector	1,500	
Step 9 (Dentist in Salelologa)		
Instruments (complete set)	400	-
Accommodation for a dentist	1,500	
Step 10 (Health Inspector in Salelologa):		
Accommodation for a health inspector	1,500	
Step 11 (Pharmacy branch in Salelologa):		
(The pharmacist taken from the personnel at AGH: a room in the new hospital in Salelologa utilized)		-
Step 12 (Three new District Nurses per year):		
Salaries 12 district nurses	-	4,030
Accommodations for 12 district nurses (a 1,000)	12,000	
EQUIPMENT SUPPLIES ETC.		
For three dentists activities a £100 each	-	300

No other supplies like drugs, x-ray films etc. due to better utilized service, is calculated with here. Decrease of value of equipment, buildings etc. is not included in the this estimates. All dentists, health inspectors and the pharmacist are taken from the staff at Apia General Hospital, which is now responsible for the whole country. Thus, salaries for this personnel is not included in the estimate. All dentists health inspectors and the pharmacist are taken from the staff at Apia General Hospital, which is now responsible for the whole country. Thus, salaries for this personnel is not included. Nine dentists are at present available in all Western Samoa.

All two-doctor stations, Salelologa included, should in the period 1966-1970 as far as feeding of the patients and laundry is concerned is run as the present rural hospitals. However, Salelologa should from the beginning be planned for extensions including hospital kitchen and laundry corresponding to a 100 bed-hospital.

ANNUAL BREAKDOWN OF COSTS

FIRST YEAR ESTIMATE

Buildings:

1 House for Principal Medical Officer	£2,000	
Accommodation for nurses	3,000	
1 House for doctor	2,000	
1 House for dentist	1,500	
1 House for health inspector	1,500	
3 Houses for district nurses	3,000	
		£13,000

Personnel:

Doctors	650	
Nurses	230	
		880

Equipment:

3 motor vehicles	3,600	
2 x-ray units	2,400	
Laboratory equipment and instruments	700	
dental instruments	400	
1 typewriter	55	
		£7,155

Supplies:

Fuel and maintenance for one vehicle	160	
		160
TOTAL ESTIMATED BUDGET FOR 1966:		£21,195

SECOND YEAR ESTIMATE:

Buildings:

1 50 bed hospital	£100,000	
2 Houses for doctors	4,000	
2 Houses for dentists	3,000	
2 Houses for Health inspectors	3,000	
3 Houses for district nurses	3,000	
Accommodation for nurses	2,500	
		£115,500

Personnel:

2 doctors	2,590	
1 Principal Medical Officer	1,295	
Nurses	920	
3 district nurses	1,015	
		5,820

Travel:

Local travel - Principal Medical Officer	15	
3 district nurses	300	
		315

Equipment:		
Dental instruments	800	800
Office Expenses.		
Office expences - Principal Medical Officer	30	30
Supplies:		
Fuel and maintenance for 3 vehicles	960	960
TOTAL ESTIMATED BUDGET FOR 1967:		£123,425

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted:	2. Department PUBLIC WORKS & HEALTH

3. PROJECT TITLE: WESTERN SAMOA COMMUNITY WATER SUPPLY AND SCHOOL SANITATION PROJECT

4. DESCRIPTION OF PROJECT:
Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY:
Title in Organization: SENIOR ENGINEER

6. DURATION OF PROJECT
January 1966 (Starting Date)
December 1968 (Completion Date)

7. LOCATION OF PROJECT: SAFATA DISTRICT

8. BUDGET SUMMARY	Government of Western Samoa	Departmental Contribution	OTHER *	TOTAL
Salaries & Overtime	1,250	750	6,000	8,000
Local Travel* & Transport	1,000			1,000
Overseas Travel				
Office Expenses				
Furniture				
Publications				
Plant & Equipment				
Pipes & Fittings * ~~Instruments & Equipment~~	4,000		8,100	12,100
Buildings*				
Contracts*				
Other*				
TOTAL	6,250	750	14,100	21,100

* Please furnish additional details as requested in the Instructions.

WESTERN SAMOA C.W.S. AND SCHOOL SANITATION PROJECT

WHO/UNICEF ASSISTED

Description of Project (See also attached Plan of Operation.)

(a) Need and background

The 10 villages in Safata District from Lotofaga to Saaga have no piped water supply and depend mainly on the water from the three streams in the area. There are about two small springs in the area which are inadequate in quantity and unsatisfactory for human consumption. Of the three streams in the area one dries up for several months of the year. Often there are only two sources of potable water along the 8 miles of coast which form the area to be served. Cases of water-borne disease in the 10 villages of the District treated in the Fusi Hospital averaged 42 for the diarrhoeas, seven for typhoid and 16 for infective hepatitis in the last three years. Apart from the health aspect a piped water supply would greatly uplift the general well-being of the people. More time and energy would also be available for agricultural work.

The water supply would be drawn from the Nuusuatia and Mulivai Rivers. These rivers have been checked over the past five years and are capable of maintaining the required flows. Pipe sizes have been designed to cope with the demand for the next 20 years.

(b) Objectives

The immediate objective of the project is to provide piped water supply for 10 villages in the Safata District. Subsequently to provide also water supply in other villages to be selected.

No direct income or employment increase is expected to be generated by the project. The installation of water supply and toilets for the schools will provide what is normally an essential social service and as much would raise considerably the health and living standards in the area.

(c) Method of Accomplishment

The project will be operated in three phases, Phases I & II are expected to be accomplished in 1966-1967 and Phase III the following year.

The project will be financed by approximately equal shares from the Government, the villages and UNICEF. The villages contribution will mainly be in the form of free unskilled labour. This will involve roughly 10,000 man days. The Government would finance a skilled plumber, masons, carpenters and helpers with occasional supervision by a P.W.D. engineer.

(d) Project to be directed

A Senior Engineer, P.W.D. will direct the field operation of the project.

A Health Inspector will also be assigned in the district to look into the health aspects of the project at the same time promote the installation of sanitary facilities in individual households.

(e) Sequence of Operations'

	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Construction of toilets in schools													x	x	x	x	x	x	x	x	x				Programming
Installation of taps									x	x	x	x										x	x	x	
Procurement of taps, etc.	x	x	x																						Planning
Laying remainder of pipes																x	x	x	x	x	x	-	x	x	
Laying 4" + 6" pipes				x	x	x	x	x	x	x	x	x													
Trenching				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Procurement of 4" + 6" pipes & fittings	x	x	x																						
Procurement smaller diameter pipes and fittings																									

January 1966 — December 1966 — December 1967 — January 1968

(f) Budget and Finance

Contributions

Year	PHASE I (1966)	PHASE II (1967)	TOTAL	PHASE III (1968) (Tentative)
UNICEF	6,960	5,940	12,900	7,000
Government	7,000	6,200	13,200)	14,000
Village	7,140	8,140	15,280)	
			41 380	21,000

This is the summary as proposed. The actual cash amount required by the villages is only £1,530, the balance is the estimated cost of their free labour for trenching, assisting in laying pipes, construction of intake, etc.

1966

UNICEF	6" AC (asbestos cement) pipes	4,800	
	4" AC	2,060	
	Fittings	100	6,900
Government	6" steel pipes	2,900	
	4" steel "	1,100	
	Supervision	750	
	Skilled labour for pipe laying	1,250	
	Transport, etc.	1,000	7,000
Village	Intakes (material & labour)	500)	
	Taps (small pipes & taps)	640)	
	Unskilled labour (village) for pipe laying	6,000	7,140

1967

UNICEF	PVC (Polyvinil Chloride) Pipe	5,530	
	Fittings	410	5,940
Government	Supervision	750	
	Skilled labour pipe laying	1,750	
	Transport, etc.	1,000	
	Toilets	2,700	
		6,200	
Village	Pipe laying unskilled (village) labour	7,500	
	Taps (small pipes & taps)	640	
		8,140	

1968 (Tentative)

UNICEF	7,000
Government & village	14,000

Sequence of Operations

1966 All 4" and 6" pipes ordered and transported to site 6" laid from intake to Nulivai. Materials for tap connections supplied and taps installed in some villages. Trenching along coastal road started.

1967 Remainder of piping purchased. Toilets constructed. All piping laid and tap connections made. Programming for 1968 assistance to other villages.

1968 Procurement of materials, construction of headworks and installation of reticulation system.

Village	Pipe laying unskilled	7,500	
	Taps	640	8,140

(g) Phasing Estimates

Government Expenditure	January	1966	
	June	"	5,000
	December	"	6,250
	June	1967	9,250
	December	"	11,700

PROJECT SUMMARY

Year		2	Total	3 (Tentative)
UNICEF	6,960	5,940	12,900	7,000
Government	7,000	6,200	13,200	14,000
Village	7,140	8,140	15,200	
			£41,380	£21,000

Project Estimate (PHASES I & II)	
Pipes & fittings	16,900
Pipe laying unskilled (village) labour	13,500
Pipe laying skilled labour	3,000
Transport freight & storage	2,000
Intakes (material & labour)	500
Supervision	1,500
Toilet (material & labour)	2,700
Taps	1,280
	£41,380

Pipe Cost

Totals	Quantity	Rate	Amount
6" steel	5,800	10s.	2,900
6" A.C.	17,450	5s.6d.	4,800
4" steel	3,700	6s.0d.	1,100
3" PVC	18,300	3s.0d.	2,750
4" A.C.	9,700	4s.3d.	2,060
2½ PVC	21,800	2s.6d.	2,730
2" PVC	500	2s.0d.	50
Fittings			510
			16,900

Pipe Installation Cost (labour & incidentals)

	Quantity	Rate	Amount
6" steel	5,800	6s.0d.	1,740
6" AC	17,450	6s.0d.	5,235
4" AC	9,700	5s.0d.	2,425
4" steel	3,200	3s.6d.	650
3" PVC	8,300	4s.0d.	3,660
2½" PVC	21,800	2s.6d.	2,730
2" PVC	500	2s.0d.	50
			£16,490 say £16,500

PLAN OF OPERATION

FOR

A COMMUNITY WATER SUPPLY AND SCHOOL SANITATION PROJECT IN WESTERN SAMOA

The Government of Western Samoa hereinafter referred to as the "Government", the World Health Organization, hereinafter referred to as the "WHO" and the United Nations Children's Fund, hereinafter referred to as "UNICEF";

Being desirous of obtaining mutual agreement concerning a Community Water Supply and School Sanitation Project in Western Samoa, particularly with reference to the purposes of the project and the responsbilities which shall be assumed by each parties;

Declaring that these responsibilities will be fulfilled in a spirit of friendly cooperation:

HAVE AGREED AS FOLLOWS:

PART I

Basis of Relationships

The Basic Agreement concluded between the Government of Western Samoa and WHO on .... and the agreement between the Government and the WHO for the operation of an inter-country project in the South Pacific signed by the Government on .... 1965 will provide the basis for relationships between the Government and the cooperating agencies in this project, and the articles of this plan of operation are to be interpreted in the light of these agreements.

PART II

Area

The project will be operated in Western Samoa.

Western Samoa, until 1 January 1962 when it gained its independence, was a Trust Territory of the United Nations administered by the Government of New Zealand. It lies between 13 to 14 degrees South Latitude and 171 to 173 degrees West Longitude. The Islands are about 430 miles North of Tonga and about 500 miles North-East of Fiji.

The territory consists of two large islands Upolu and Savaii and six smaller ones Manono, Apolima, Nu'utele, Nu'ulua, Namoa and Fanuatapu. It has a total land area of about 1,113 square miles and a population of 114,449 according to the last census of 15 September 1961. The average annual rate of increase between 1956 and 1961 intercensal years was 3.5 per cent.

Savaii, the biggest of the islands has a length of 47 miles and its greatest breadth 27 miles. Upolu - the other big island and where the seat of Government is located, is about 47 miles in length and 15 miles in its greatest width and a land area of about 430 square miles. All the islands are mountainous rising to about 6,000 feet in Savaii and 3,600 feet in Upolu and of volcanic origin. Except in those regions where the flow of lava was too recent, particularly in North-western Savaii, the whole of the islands is clothed in dense tropical vegetation.

There is a pronounced distinction between the dry seasons (May to October) and the wet season (November to April). The precipitation is uneven in territorial distribution. Rainfall in the Northern Coast of Upolu (Apia) has a yearly average of about 112 inches, in the Western end about 110 inches and in the Southern Coasts about 30 per cent greater than in the Northern Coast. The pattern of rainfall is similar in the other islands but the average annual rainfall in Savaii had been found to be 120 inches in the Northern Coast and in the Southern coast considerably more. During the dry season many streams are dry, and some of the rivers and springs have very much reduced flows. In some parts of the islands, particularly in the Western end of Savaii, the geologic structure of the area does not permit formation of surface water, making the people dependent on rain and foreshore springs for water supply.

The incidence of communicable diseases in the country, many of which are subject to control by proper sanitation and hygiene, is sufficiently high to warrant remedial measures. For some years, the Western Samoa Government has had a continuing programme of water supply development. Village water supplies are partly under subsidy by Government, still progress is slow and at the present time only about ¼ of the village population have water supply systems. This project therefore should assist and stimulate further the provision of water supplies in villages of the country.

UNICEF is already assisting the Government of Western Samoa in several health programmes. It is probable that the improvement in water supplies will further benefit some of these programmes, especially the TB Control, Yaws and MCH programmes in making easier the procurement of abundant water for personal hygiene and in promoting the provision of more hygienic means of waste disposal in villages and schools.

PART III

Objectives

The Government, with assistance from WHO and UNICEF, has the following objectives in connection with this plan:

(1) to assist villages in the provision of piped-water for domestic purposes where it is economically feasible;

(2) to assist the Government in the survey and study of alternate sources where surface water by gravitation is not obtainable;

(3) to develop cheap, but effective basic sanitary facilities and to demonstrate the suitability and advantages of these sanitary facilities by installing them in a number of village schools; and

(4) to advise villages on other aspects of environmental sanitation.

PART IV

Methods

The parties agree to implement and develop the project according to the technical methods and procedures recommended by WHO. These methods will include :-

(1) Survey of existing conditions in villages and schools to be assisted;

(2) Investigation of the most feasible method of providing safe water in adequate quantity;

(3) Design of piped water systems that are efficient and economic;

(4) The installation of such systems in representative villages and schools;

(5) The provision of adequate basic sanitary facilities in schools and promotion of their installation in the villages; and

(6) The education of children and adults on the role of safe water and the effect of hygienic waste disposal in their health.

PART V

Plan of Action

1. The plan of action for this project shall be as follows:

The promotion of this project shall be the responsibility of the Health Department. Engineering surveys, investigation, design and construction of village water supply schemes shall be undertaken by the Public Works Department.

So much detail in the design shall be included to allow complete listing of materials required and to make the estimates of costs of materials required for each scheme. The supplies required will be supplied by UNICEF and the Government as mutually agreed and as detailed in PARTS VIII and X of this plan of operation and the planned village water supply systems will be constructed by the Government.

Construction shall commence immediately after the delivery of the imported materials provided by UNICEF. Construction will utilise locally available materials to the fullest extent as well as local community participation in terms of materials and labour.

At the end of each phase of the Project, the Director of Health will prepare a summary report on that phase to include the following:

(a) A statement of the villages and population actually served and facilities installed, and the total cost of these facilities.

(b) The plans of Government for continuing or expanding this work.

2. Beneficiaries

The immediate beneficiaries of these village water supply schemes will be the inhabitants of the 10 villages included in the First and Second Phases of this Project estimated to be about 5,340 in this year and the projected population of these villages of 9,2 0 in 1985. The provision of water supply and sanitary facilities at schools will benefit the present school enrolment of 600 children in four public schools. As the names of villages for other phases of the Project are selected the names of these villages including pertinent information will be communicated by Government to WHO and UNICEF.

3. Target Time Schedule

The parties of this plan will undertake as far as possible to carry out their respective responsibilities according to the following target time schedule:

(a) PHASE I Before the end of November 1965 the investigations, surveys and preliminary designs of water supply schemes in selected villages and schools shall be completed. Collection of village contribution to be initiated.

Final designs and completed list of materials to be requested from UNICEF for the parts of the systems to be included in Phase I shall be submitted to WHO and UNICEF before the last day of December 1965.

It is anticipated that the UNICEF materials needed for Phase I will be delivered within the first half of 1966 and that the water supplies will be constructed within one year after delivery of UNICEF materials.

(b) PHASE II   Before the end of March 1966 the list of materials to be requested from UNICEF for Phase II of the project shall be communicated to UNICEF and WHO. The UNICEF materials for Phase II should be delivered in the first quarter of 1967 and construction utilising these materials will be completed by the Government within one year of the delivery of these materials.

(c) PHASE III   The Government shall communicate to UNICEF and WHO the list of materials to be requested from UNICEF for Phase III of the project including such pertinent information on the villages to be assisted before the end of March 1967. UNICEF materials for this Phase should be delivered before the end of 1967 or early part of 1968 and the construction of the water supply systems completed within one year after the arrival of these materials.

4. Evaluation

(a) WHO and UNICEF will participate with the Government in assessing the work accomplished in, or the progress made towards meeting the targets of this plan of operation. The Director of Health will participate on behalf of the Government.

(b) The Government will continue evaluation after the period of international cooperation.

The plan of operation, and any detailed arrangement for its implementation will be reviewed and modified by mutual consent whenever such action is considered necessary on the basis of an evaluation of the project.

5. The period during which assistance is expected to be provided by WHO and UNICEF for implementing the project is estimated to be three years.

PART VI

Administration and Assignment of Responsibility

The project will be conducted under the responsibility of the Government with the technical advice of WHO and the material assistance of UNICEF.

PART VII

Commitments of WHO

WHO agrees to provide, subject to the availability of funds, the services of a sanitary engineer for short visits to give technical advice, if so required by the Government for the successful implementation of the project.

PART VIII

Commitments of UNICEF

1. UNICEF will provide supplies and equipment as mutually agreed for the project, which may include pipes, valves, pipe fittings, wash basins and drinking fountains.

2. Funds will be allocated by UNICEF in 1966 to cover the cost of materials for the implementation of Phase I of the project and in 1967 and 1968 to cover the requirements of Phases II and III up to a total estimated amount of $60,000 in the three-year programme (subject to the availability of funds approved by the UNICEF Executive Board for the Block Allocation for the Pacific Island Territories).

3. Unused funds of the UNICEF allocations will be returned to UNICEF's general resources.

PART IX

TRANSFER of Title to UNICEF equipment and supplies

1. The title to the supplies and equipment to be provided by UNICEF shall be transferred to Government immediately upon arrival in the country. Transfer shall be accomplished upon delivery to UNICEF of signed Government receipt on the form provided by UNICEF.

2. Should any of the supplies and equipment thus transferred for any reason not be used for the purpose of this plan of operation, UNICEF may require the return of any or all such supplies and equipment, and the Government will, when so requested, make such items freely available to UNICEF.

PART X

Commitments of the Government

1. The Government will provide all personnel, materials, supplies, equipment, and local expenses necessary for the project, except as provided in PARTS VII and VIII including the following:

(a) Premises

The office of the Director of Health of the Health Department will be the official headquarters of this Community Water Supply and School Sanitation project.

(b) Supplies and Equipment

Supplies and equipment necessary for the successful execution of the project except as provided by the cooperating agencies.

2. The Government will also provide the following:

(a) Storage and internal transportation of UNICEF supplies and equipment;

(b) Cost of necessary telephone, telegraph and postal communications;

(c) Cost of incidental expenses necessary for the successful implementation of the programme.

3. Reports from the Government

The Government will keep WHO and UNICEF informed of the progress of the project. Such reports as are required will be prepared periodically by or on behalf of the Government and made available to the parties.

4. Publications

The Government, WHO and UNICEF will consult each other regarding the publication, both national and international, of findings and reports compiled in connection with the project.

5. Continuation of Project

The Government will continue the programme within the scope of available resources after assistance from WHO and UNICEF has ended.

6. Accounting for UNICEF supplies

With respect to supplies and equipment made available by UNICEF, the Government will be responsible for their receipt, warehousing, and accounting. The Controller of Government supplies will undertake this responsibility for the Government. UNICEF supplies will be kept and accounted for separately from other project supplies, and they will be issued to the project on requisition by a qualified officer designated by the Government. The accounting procedure for UNICEF supplies will conform to the general procedure for UNICEF supplies and will provide the information required by UNICEF.

7. Evaluation facilities

Evaluation facilities will be made available by the Government to WHO and UNICEF when necessary, including access to statistical and other records, and assistance from statistical and other governmental services and use of their facilities.

8. Costs to Government

The Government willprovide in its Budget for the fiscal year 1966-1967 the amount of £27,000 as Government contributions for the work included in Phase I of this project. The cash contribution of the villages themselves for materials is estimated to be £890. In addition to their cash contribution the villages will also provide unskilled labour estimated to cost £6,000.

The estimate of costs of the work to Government and villages to be undertaken in Phases II and III of this project will be communicated to UNICEF and WHO together with other informations as required under Part V, Plan of Action paragraphs 3 (a) and (b) in the Target Time Schedule of this plan of operation.

* W.S.£ = $2.86

PART XI

Final Provisions

1. This plan of operation will come into effect upon signature by the parties and will remain in effect until the international assistance provided by WHO and UNICEF has ended, including such period of time as may be necessary for winding-up arrangements.

2. This plan of operation may be modified by mutual consent of the parties.

IN WITNESS WHEREOF the undersigned, being duly authorized, have signed this Plan of Operation.

Done in eight copies in English.

At Apia on .... FOR THE GOVERNMENT OF WESTERN SAMOA

Signature: ______________________
Name :
Title :

At Manila, on .... FOR THE WORLD HEALTH ORGANIZATION

Signature: ______________________
Name :
Title :

At Bangkok, on .... FOR THE UNITED NATIONS CHILDREN'S FUND

Signature: ______________________
Name :
Title :

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: 5/11/'65	2. Department P.W.D.
3. PROJECT TITLE: EAST COAST WATER SUPPLY		

4. DESCRIPTION OF PROJECT:

Attach separate sheets detailing the following:

(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING

(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: PWD

Title in Organization: DIRECTOR OF WORKS

6. DURATION OF PROJECT
1/1/66 (Starting Date)
31/12/67 (Completion Date)

7. LOCATION OF PROJECT: NORTH EAST COAST UPOLU

8. **BUDGET SUMMARY**

	Government of Western Samoa	Departmental Contribution	OTHER * Village	TOTAL
Salaries & Overtime		£200	£2,500	
Local Travel*				
Overseas Travel				
Office Expenses				
Furniture				
Publications				
Plant & Equipment				
Instruments & Equipment *				
* Pipes	£18,000			
Contracts*				
Unskilled labour			£ 5,000	
TOTAL	£18,000	£200	£ 7,500	£25,700

* Please furnish additional details as requested in the Instructions.

EAST COAST WATER SUPPLY

1. Description of Project

The project is the installation of a piped water supply from Falevao along the East Coast to Solosolo. Sources of the water are at the sites of existing measuring weirs behind Falevao and Solosolo. The supply will serve the villages of Falevao, Falefa, Faleapuna, Lufilufi, Saluafata, Fusi, Salelesi Eva and Solosolo. The population served by the new scheme would be approximately 4,000.

2. Objectives

At present only Solosolo of the abovenamed villages have a piped supply. The remainder depend on seaside springs and a few streams all of which are easily subject to contamination. The main feed pipes from the intakes would open up new inland areas for easier settlement. This should ultimately increase production. The supply would greatly uplift the standard of living in the villages by obviating the long walks necessary to obtain water. It will also be conducive to higher health standards.

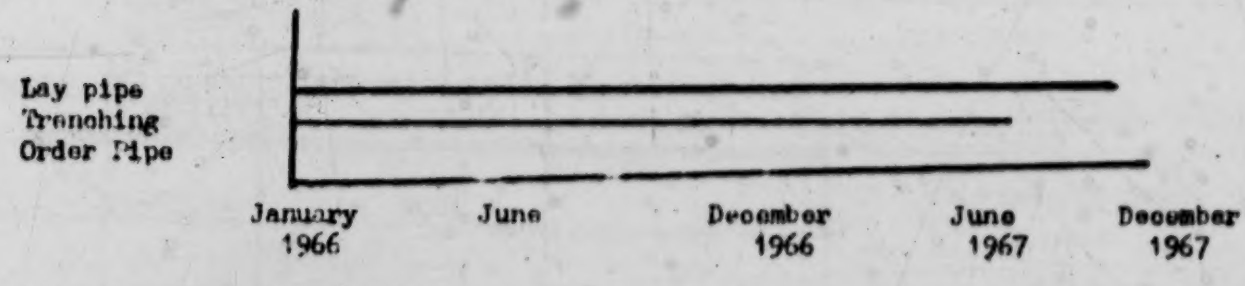
3. Method of Accomplishment

The method of accomplishment is that used successfully in the past whereby the Government supply the main pipes only and the villages supply free labour and finance for skilled labour, tap connections and other aspects of the work.

4. Project to be directed by

A Senior Engineer PWD will be directly in charge of the project.

5. Sequence of Operations



6. Location of Project

The project is located on the North East Coast of Upolu as shown on the attached plan PWD No 3300

7. Budget

Government		Village	
15,000' of 6" dia @ 10/-	£7,500	Skilled labour	£2,500
33,000' of 4" dia @ 6/-	£10,000	Unskilled labour	£5,000
Fittings	500		
	£18,000		£7,500

8. Phasing Estimates

% complete	Government Expenditure
	0
25%	£7,500
50%	£18,000
100%	£18,000

The village counterpart would be responsible for the other expenditure involved in the project.

I

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.

1. Date Submitted: 5/11/65

2. Department P.W.D.

3. PROJECT TITLE: EAST FALEALILI WATER SUPPLY

4. DESCRIPTION OF PROJECT:
Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: P.W.D.
Title in Organization: DIRECTOR OF WORKS

6. DURATION OF PROJECT
1/1/65 (Starting Date)
31/12/65 (Completion Date)

7. LOCATION OF PROJECT: EAST FALEALILI

8. BUDGET SUMMARY

	Government of Western Samoa	Departmental Contribution	OTHER VILLAGE *	TOTAL
Salaries & Overtime		£150	£1,200	
Local Travel*				
Overseas Travel				
Office Expenses				
Furniture				
Publications				
Plant & Equipment				
Instruments & Equipment				
* Pipes	£12,750			
* Intake			£ 300	
Unskilled labour			£3,000	
T O T A L	£12,750	£150	£4,500	£17,300

* Please furnish additional details as requested in the Instructions.

EAST FALEALILI WATER SUPPLY

(1) Description of Project and Benefits Expected

The area from Tafatafa to Salani is at present served only by three rivers and two springs for water supplies. At the coast where water is drawn from these supplies the rivers and springs are subject to contamination by animals and people living along the main road which is further inland. The long distance necessary for some villages to fetch water is time consuming and unnecessary hardship. A piped supply would give a considerable uplift to the standard of living. The population to be served is approximately 1,300. As seen on the plan considerable areas would be opened up for settlement.

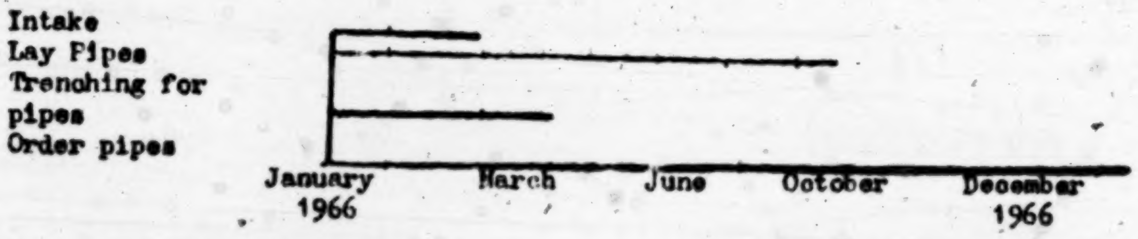
The rivers have been checked over the past five years to ensure they can supply the required flows. Pipe sizes have been designed to cope with the demand in 20 years time.

(2) Method of Accomplishment

The method of accomplishment is that used successfully in the past whereby the Government supplies the main piping and the villages supply free labour and finance for skilled labour and tap connections, intakes etc. The actual Government contribution therefore is pipe materials only.

(3) Project to be directed by - Senior Engineer, P.W.D.

(4) Duration of Project and sequence of operations



(5) Location of Project

East Falealili as shown in attached Plan PWD No. 3308.

(6) Budget

Government		Village	
6,600 of 6" dia @ 10/-	£3,000	Skilled labour	£1,200
20,000 of 4" dia @ 6/-	£6,000	Unskilled labour	£3,000
10,000 of 3" dia @ 5/-	£2,250	Intake	£ 300
2,500 of 2½" dia @ 4/-	£1,500		
			£4,500
	£12,750		

(7) Phasing Estimates

The £13,000 would all be spent in the first quarter of the project. The village counterpart would be responsible for the rest of the project.

XI

GOVERNMENT OF WESTERN SAMOA
DEVELOPMENT BOARD
Apia, Western Samoa

ECONOMIC DEVELOPMENT PROJECT APPLICATION

EDB Project No.	1. Date Submitted: **5/11/65**	2. Department **P.W.D.**

3. PROJECT TITLE: **SAMUSU WATER SUPPLY**

4. DESCRIPTION OF PROJECT:
Attach separate sheets detailing the following:
(a) NEED (b) OBJECTIVE(S) (c) METHOD OF ACCOMPLISHING
(d) BENEFITS EXPECTED

5. PROJECT TO BE DIRECTED BY: **P.W.D.**
Title in Organization: **DIRECTOR OF WORKS**

6. DURATION OF PROJECT **1/1/66** (Starting Date) **31/12/67** (Completion Date)

7. LOCATION OF PROJECT: **SAMUSU**

8. BUDGET SUMMARY	Government of Western Samoa	Departmental Contribution	OTHER * **Village**	TOTAL
Salaries & Overtime		£30	£100	
Local Travel*				
Overseas Travel				
Office Expenses				
Furniture				
Publications				
Plant & Equipment				
Instruments & Equipment				
*** Pipes**	£2,250			
Contracts*				
Unskilled Labour			£300	
TOTAL	£2,250	£30	£400	£2,680

* Please furnish additional details as requested in the Instructions.

SAMUSU WATER SUPPLY

(1) Description of Project

The adjacent villages of Samusu and Amaile have no piped water supply. They depend on a coastal spring which is not protected from contamination and which provides brackish water at high tide. The project allows for a piped supply from an inland river source. The population to be served by the supply is approximately 900 people.

(2) Objectives

The object of the project is to provide a proper piped supply of water to Samusu and Amaile villages.

(3) Methods of Accomplishment

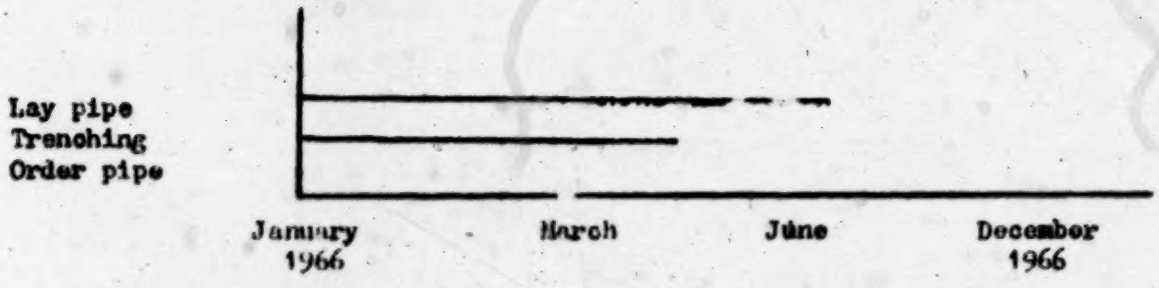
The method of accomplishment is that used successfully in the past whereby the Government supply the main pipes only and the villages supply free labour and finance for skilled labour and tap connections etc. The skilled tradesmen will therefore be from P.W.D. but paid by the village.

(4) Benefits expected

The supply will greatly uplift the standard of living in the villages by obviating the long walks necessary to obtain water. It will also be conducive to higher health standards. The supply will open up new inland areas for easier settlement. This should ultimately increase production from these areas.

(5) Project to be directed by - Senior Engineer P.W.D. will be directly in charge of the project.

(6) Sequence of Operations



(7) Location of Project

Samusu Aleipata as shown in attached plan P.W.D. No. 3312.

(8) Budget

Government Finance		Village Contribution	
5,000' of 1½" pipe @ 2/6	600	Skilled labour	£100
10,000 of 2" pipe @ 3/6	1,750	Unskilled labour (Villagers)	300
Say	£2,250		£400

(9) Phasing Estimate

The £2,250 would all be spent in the first quarter of the project. The village counterpart would be responsible for the rest of the project, and would be required to be deposited prior to the start of the project.